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Subsidies and Levies as Policy Instruments to Encourage Employer- Provided Training

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DIRECTORATE FOR EDUCATION

**SUBSIDIES AND LEVIES AS POLICY INSTRUMENTS TO ENCOURAGE EMPLOYER-PROVIDED
TRAINING**

OECD Education Working Paper No. 80

By Dr. Normann Müller and Dr. Friederike Behringer

This paper was commissioned by the OECD from Dr. Normann Müller and Dr. Friederike Behringer from the Bundesinstitut für Berufsbildung (BiBB) in the context of preparation of the OECD Skills Strategy.

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ABSTRACT

This paper provides an overview of the available information concerning selected policy instruments intended to promote employer-provided training, including the stated rationale and objectives, the target groups and operational design as well as a summary of the evaluative evidence regarding their operation. The analysis focuses on policy instruments providing financial assistance or incentives, specifically, subsidies (including tax incentives and grants) and levy schemes that devote a least some share of their resources to continuing training. Training leave regulations are considered only to the extent that they can be treated as a form of subsidy or a levy scheme, depending on the main financing mechanism involved. Instruments that focus solely on improving the quality of training or enhancing transparency in the training market are not addressed. In addition to offering a description of different instruments, the paper discusses the strengths and weaknesses (or risks and opportunities, respectively) of different types of instrument or particular elements of instrument design. It also specifies principles of successful instrument design that have been put forth in the literature and concludes with some remarks regarding the choice of policies.

RÉSUMÉ

Le présent document offre une vue d'ensemble des informations disponibles sur certains instruments d'action visant à encourager la formation en entreprise, notamment l'argumentaire et les objectifs, les groupes cibles et l'élaboration fonctionnelle, ainsi qu'une synthèse des données relatives à l'évaluation de leur mise en œuvre. L'analyse porte en particulier sur les instruments d'action qui apportent des aides ou incitations financières, à savoir les subventions (y compris incitations fiscales et dotations) et les systèmes de prélèvement dont au moins une partie des recettes est consacrée à la formation continue. La réglementation applicable au congé de formation n'est étudiée que dans la mesure où elle peut être considérée comme une forme d'aide ou de prélèvement, selon le mécanisme de financement principal utilisé. Les moyens d'action qui visent uniquement à améliorer la qualité de la formation ou à renforcer la transparence sur ce marché ne sont pas étudiés. Outre une description des différents instruments, ce document présente également les avantages et les inconvénients (ou les risques et les possibilités) de divers types d'instruments ou éléments particuliers de leur conception. Il examine également les principes à l'origine de leur efficacité qui ont été mis en évidence dans les études menées sur ce sujet, et se conclut par quelques remarques sur le choix des politiques mises en œuvre.

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1 PROBLEM STATEMENT, GOAL, AND SCOPE OF STUDY

1. Technological and demographic changes are imposing a challenge on the labor markets of industrialized countries: skills are becoming obsolete at an increasing speed while at the same time employees must stay in the market for a longer time. An increased need for continuing vocational education and training (CVET) results from this. Many governments feel that the private sector has some responsibility to finance at least partly the relevant efforts and that their current efforts are not adequate to meet the skill needs (2004, p. 33). Thus, policies have been developed to increase incentives for employers and employees to invest in skill development.¹

2. This paper has been written at the request of the OECD and contributes to the OECD “Skills Strategy”, which seeks to assist countries in improving economic growth and social inclusion through better supply of, anticipating the demand for, and optimizing the use of skills in the workforce. It deals only with policy instruments targeted at employers. Such instruments are essentially motivated by three concerns: First, there appear to be major inequalities in (a) access to training for workers, and (b) training incidence among small and medium size enterprises (SMEs) and large enterprises as well as among enterprises of different industrial sectors. Second, employers are assumed to rely on the possibility of “poaching” skilled workers instead of own training investments (*e.g.* OECD, 2003, pp. 126, 134; Johanson, 2009, pp. 27-28). And third, there is a supposition that there exist benefits which are not received by the training firms, but by other employers, undermining the incentive to invest in skill development.

3. Basically, this paper is a review of the literature. The goal is to put together information that is available concerning selected policy instruments intended to promote employer-provided training, including the stated rationale and objectives, the target groups and operational design. Also, it aims at a summary of the evaluative evidence. As quite a few literature surveys, as well as reports on the advantages and disadvantages of policy instruments, already exist (*e.g.* Gasskov, 1994; Gasskov, 1998; Gasskov, 2001; Dar, *et al.*, 2003; Smith/Billett, 2004; Smith/Billett, 2005; CEDEFOP, 2008; CEDEFOP, 2009a; Johanson, 2009; OECD, 2010, pp. 121-126)², our approach was first to gather information available from these sources, then update it where necessary, with the help of more recent sources, and supplement the material with information from individual evaluation studies.

4. The analysis takes account of policy instruments providing financial help or incentives. Instruments that focus solely on improving the quality of training or enhancing transparency in the training market are not addressed.³ Specifically, we consider (a) subsidies and (b) levy schemes.⁴ Subsidies include tax incentives and grants. Training leave regulations are considered only to the extent that they can be treated as a form of subsidy or a levy scheme, depending on the main financing mechanism involved.

5. Instruments that aim solely at encouraging initial training were not included as a rule in the focus of this study. The study encompasses only such instruments that devote a least some share of their resources to continuing training. Further, the analysis is limited to policies for employed persons. Active labor market instruments to support unemployed persons or individuals threatened by unemployment are beyond the scope of this work. This includes public efforts aimed at improving the transition from school to work for youths. Moreover, it was impractical to include public training provision in the study, because it is usually not addressed along with other public financial policy instruments.

6. The report is structured as follows. First, in a separate chapter we report data from the European continuing vocational training survey (CVTS) that gives information on employers’

perceptions of public training policy effects in EU member states. The remainder of the report deals with policy instruments. It is divided into two parts. The first covers subsidies, the second deals with levy schemes. Within each part, there are three subsections.

7. The first provides an overview of policy instruments that are being (or have been) used to encourage investment by firms in work-related education and training for their employees. We first discuss instrument types on a conceptual level and describe their rationale, objectives, and principal design.

8. In the second subsection, we present specific instruments for which evaluative evidence is available in the English or German language.⁵ They need not be in effect at present. That the instruments had been implemented in OECD or non-OECD countries in the past sufficed as a criterion. In many cases it was not possible to verify whether instruments are still in force based on the literature review.⁶ We highlight specific elements of instrument design that relate to assessments of the success and failure of the models. Then we summarize the evaluative evidence on effectiveness and efficiency (if possible: impact differentiated by firm size or skill level of benefitting workers). Evaluation of efficiency judgments requires knowledge about the costs and benefits of the instruments, with costs including the deployed funds as well as the costs of implementing an instrument, including aspects like transaction costs, costs of bureaucracy, deadweight losses, substitution effects and interaction effects with existing policies and programs, as well as other implementation problems. However, the aspects mentioned above are treated only fragmentarily in the existing literature. The study puts together the information available for the selected instruments. In the case of instruments that have not been evaluated, we report expert authors' assessments of the instrument's success. In many cases, however, the experts' comments relate merely to principal strengths and weaknesses of the instruments. They are usually, not based on statistical analysis. Sometimes they may simply express personal views.

9. The final subsection summarizes – based essentially on the experience with specific instruments – strengths and weaknesses (or risks and opportunities, respectively) of instrument types or particular elements of instrument design (if meaningful with respect to specific conditions). It also specifies principles of successful instrument design that have been put forth in the literature.

10. The report concludes with some final remarks regarding the choice of policies.

¹ Ashton/Sung/Turbin (2000) and Gasskov (2001) developed typologies to characterize the different national approaches to the finance and provision of enterprise training. They have been blended by Smith/Billett (2005). The four types identified go along with varying degrees of regulation, whereby the latter does not have to be imposed by government. "Laissez-faire systems" impose no major regulation or obligation to train on employers. In "high employer commitment systems" employers voluntarily commit themselves to skill formation and financing of training, the German dual system being the most well-known example. On the next level, bipartite actions are taken to develop training funds under collective industrial agreements on a sectoral basis. The highest degree of regulation is given, when governments get involved by imposing compulsory training levies on employers.

² These studies may have broader subjects, but employer-provided training is always part of their scope.

³ Yet a different approach is taken by the UK-based Investors in People (IiP) program. Being a laissez-faire type of instrument in the typology of Smith/Billett (2004), it attempts to encourage training by providing public recognition to firms, if their human resource development complies with defined standards. Provided this is the case, firms are permitted to use the IiP label for marketing purposes. The success of this instrument has been questioned (Smith/Billett, 2005, p. 104; [based on: Goodwin, *et al.*, 1999; Emberson/Winters, 2000; Department of Education and Employment, 2000]).

⁴ Smith/Billett (2004, pp. 7, 35-42) identify five broad types of policy mechanisms. Apart from levies and what Smith/Billett (2004) call "leverage" (*i.e.* basically subsidies), these include partnerships, regulation, and instruments to change enterprises' perception of training investment. Whereas levies and

regulation are viewed as approaches compelling enterprises to contribute to skill development, subsidies and partnerships are seen as ways to encourage enterprise expenditure on training.

⁵ It is not possible to provide either a complete overview of all instruments used in a specific country or a complete list of all the countries which apply a specific instrument type. For our research of publications on policy instruments we used three avenues: the previously quoted literature surveys; various literature databases (Literaturdatenbank Berufliche Bildung [LDBB], EconLit, Education Research Complete, Education Resource Information Center [ERIC], Vet-Bib, VOCED, ReREc); Google.

⁶ Figuring out whether instruments are still in force would have required a major additional effort, making it unfeasible to complete the project within schedule. Anyway, this information does not seem to be relevant to the report as the main goal is to derive assessments of what works and what does not regardless of when the program existed. To be on the safe side, in linguistic matters, we use past tense, if an instrument has been terminated or if we are not sure of whether the instruments still exists, and present tense, if the instrument is still in force.

2 THE ROLE OF PUBLIC SUPPORT FOR ENTERPRISES IN EUROPE

11. Many governments are providing incentives to stimulate employer-provided continuing vocational training (CVT). The European Continuing Training Survey 2005 (CVTS) delivers information on enterprises' perceptions of effects of selected public measures on their planning, policies and practices with respect to continuing vocational training of their staff. Of course, this is neither a meticulous measurement of effects nor an evaluation of impact, but – nevertheless – provides interesting information.

12. CVTS looked at financial incentives, *i.e.*

- tax relief on expenditure on training persons employed
- financial subsidies defraying the costs of training persons employed, as well as on other public measures to encourage employer investment in vocational education and training (VET), such as
- publicly-funded advisory service aimed at identifying training needs and/or developing training plans
- procedures to ensure the standards of trainers (*e.g.* by national registers, assessment etc.)
- provision of recognized standards and frameworks for qualification and certification.

13. On average, 36% of the enterprises that provided continuing training to their staff indicated that these public measures had an effect on their planning, policy and practices regarding CVT. However, only in eight countries did enterprises assess the financial incentives as representing the most helpful public measures – provision of recognized standards and frameworks for qualification and certification, publicly-funded advisory services or ensuring standards of trainers were seen as more influential in the other 17 countries for which comparable information is available. In four countries – Cyprus¹², Greece, Belgium and France – subsidies are seen as effective by at least 40% of training enterprises (*cf.* Figure 1). Particularly in the newer Member States, only few enterprises feel that financial subsidies have an effect on the CVT they provide for their employees. From the training enterprises' point of view, tax reliefs had an effect in particular in the Netherlands, Greece, Spain, Belgium and Austria (20% or more of the training enterprises answering positively). The measure is size sensitive to a varying degree within the individual countries. In particular in Spain and Hungary, large enterprises agree more frequently about the effects of tax reliefs than do smaller enterprises providing training to their employees, while in other countries (*e.g.* Belgium, France, and Slovenia) no substantial size sensitivity was found (*cf.* CEDEFOP, 2010).

¹ Footnote by Turkey: “The information in this document with reference to «Cyprus» relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

² Footnote by all the European Union Member States of the OECD and the European Commission: “The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus”.

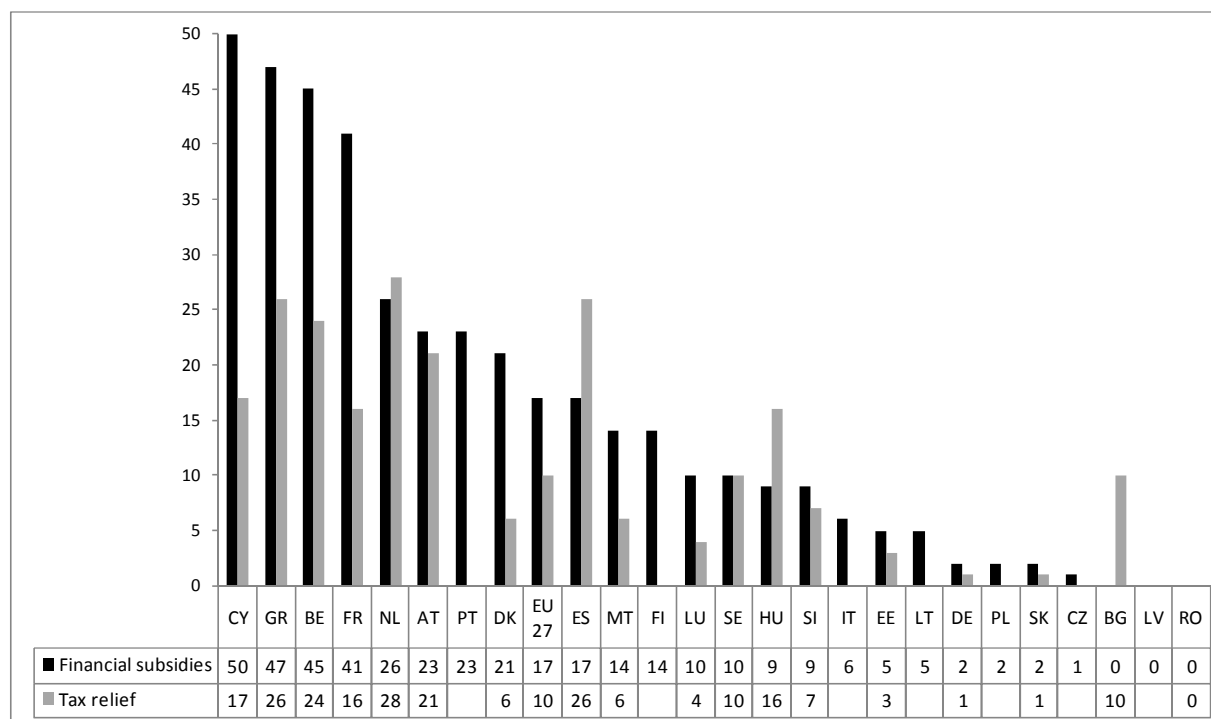
14. In conclusion, countries differ in the measures implemented to foster employer-provided CVT. What we observe in CVTS is the enterprises' assessment of whether or not the measures had an effect at the enterprise level. This could be biased in the direction of overestimation of the effect of public measures or in the direction of underestimation (*e.g.* if the respondent is not aware of the measures).

15. In some countries, small training enterprises lag behind bigger training enterprises regarding the perceived effects of public measures. This could be a result of underestimation in smaller enterprises – but, as response patterns differ between the different types of public measures, we assume that this possible response bias is not very relevant in our context.

16. An (unintended) size effect of public measures could be caused first of all by the fact that, in order to benefit, enterprises need information, *e.g.* on the existence of the measures, on the criteria of eligibility, on procedures of application. This is a general problem associated with public measures for all enterprises. However, bigger enterprises at which one or more persons are specifically concerned with training issues are better equipped to retrieve the kind of information needed. Furthermore, even if the public measures are known, there are still routines that have to be attended to (*e.g.* application). The cost of these procedures might be less important for bigger enterprises, relative to their overall training costs.

17. Hence, from our point of view, the size sensitivity of public measures indicates that the target group of small enterprises might not be addressed adequately, yet. Reducing the cost of training investments (via subsidies or tax reliefs) reduces just a part of the barriers faced by small enterprises in particular. It seems that financial incentives need to be complemented with training counseling/advisory services that enable enterprises to see their own skill needs and to develop training plans.

Figure 1.1. Perceived effects of financial subsidies and tax relief on expenditure on training (2005; in % of training enterprises)



Source: Eurostat, CVTS3, Date of extraction: 29.11.2011.

Notes: UK, NO are excluded because of limited comparability. For IE data are not available. Data not applicable or real zero for tax relief in CZ, FI, IT, LT, LV, PL and PT. Countries are sorted according to the share of enterprises perceiving effects of financial subsidies in descending order. Regarding the status of CY refer footnotes 1 and 2.

3 SUBSIDIES

3.1 *Instrument types*

18. In this section, we address instruments that are based on a financial contribution to employer-provided CVET by the government. For a subsidy to qualify for consideration, it had to be possible to view employers as beneficiaries of the instrument. Whether this is the case depends not so much on the declared rationale and target group of the program, but primarily on who gets to decide on the content of training. For instance, individual learning accounts (ILA) are often considered to be a tool that benefits employees (see EIM/SOER, 2005, p. 68). However, ILAs may encourage both employer and employee investment at the same time. Who should count as the main beneficiary depends on who decides on the content of training, the training course, and the provider. Instruments would have been a principal subject of this report, had they left these choices up to employers. However, during the survey, we did not become aware of any such model.¹ Further, subsidies to organizations providing training or training related services to firms are excluded from the analysis, because distinguishing them from the institutional funding of vocational education and training schools would have been too complex a task for such a small project.²

19. Training subsidies firms are usually motivated by the presumed existence of externalities, *i.e.* benefits accruing to firms other than the investing one (Johanson, 2009, p. 33). Provided that such external value of training activities does exist, it must be assumed that there is under-investment in enterprise training. Subsidies are intended to mitigate this problem by leveraging additional funds from enterprises and increasing the volume of training provided. Further, subsidies can address specific target groups, thus providing a means to attain a more equitable distribution of enterprise training among (a) industry sectors, (b) small, medium and large enterprises, as well as (c) male and female employees or workers with different skill levels. In many cases, subsidies focus on forms of training that are considered as inducing a transferable qualification, for instance during apprenticeships.³ The generation of firm-specific skills, in turn, is often regarded as the responsibility of employers. Therefore, one could make the assumption that subsidies are less extensively used to promote continuing training than to promote apprenticeships or other forms of initial vocational education and training.⁴

20. We distinguish between direct subsidies and indirect subsidies. In principal, the category of direct subsidies includes any government payment to enterprises for the purpose of promoting employer-provided CVET.

21. Often, such support takes the form of vouchers chartering a certain amount of training or a certain training value. Vouchers, however, are much more frequently used as policy instruments targeted at individuals.⁵

22. In many cases, support to firms is given as a cash grant, *e.g.* for the development of training plans or the conception and provision of training measures for a number of employees, as well as to cover direct training costs. Grants are often part of strategic public aid programs. The latter may pursue different strands of activity, for instance, fostering local cooperation and networking among actors (such as VET authorities, VET providers, VET counselors, and firms), increasing awareness of the benefits of VET, or providing assistance and counseling to enterprises.

23. Subsidies might also cover indirect costs, *i.e.* trainee wages during training-related absences.⁶ It seems unlikely, however, that the subsidization scheme concentrates mainly on the funding of indirect costs without at the same time supporting the direct costs of training. Thus, we did

not consider a separate category for the subsidization of trainee wages. Besides, government subsidization of trainee wages appears to be more common in the context of initial VET.⁷ The coverage of trainee wages during continuing VET courses appears to be much more conventional in levy schemes.⁸

24. Subsidies might also take the form of interest-free loans or loans at reduced interest rates.⁹ Typically, however, training loans address individuals to mitigate capital market failure. For this reason we excluded them from this report.

25. Finally, the concept of direct subsidies can encompass training funds as well, if they are financed through donors or government contributions.

26. Indirect subsidies are basically tax incentives for enterprises, which include tax credits and tax allowances (see CEDEFOP, 2009c, p. 21). Tax credits (or tax deductions) lower the tax due and are equivalent to a 100% government subsidy. Tax allowances, by contrast, reduce the tax base, usually firm profit, hence corresponding to a much lower value of subsidization depending on the profit tax rate. It must be noted that in most countries, 100% of training expenses can be deducted from firm profits and reduce taxable income just like many other types of company expenses. Only stipulations going beyond this policy can be regarded as tax incentives (*ibid.* p. 88). Usually, the magnitude of tax incentives is assessed to equal a certain percentage of entrepreneurial training expenditures. Relevance of training for the enterprise must be verified. Mostly, formalized training and direct costs are eligible, foregone productivity is excluded. Often, internal training is excluded, too (*ibid.* p. 91). However, firm contributions made to ILAs may be deductible. Naturally, tax incentives are generally managed by tax authorities.¹⁰

3.2 *Evaluative evidence*

27. Evaluative literature on government subsidies for employer-provided CVET is sparse. In fact, there is limited information on such activities in general. International literature surveys on co-financing models or policy instruments designed to stimulate employer-provided CVET cover levy schemes much more extensively – and also more intensively – than subsidization schemes. This is most likely not because subsidy schemes are rare, but because there are many small-scaled programs, so that only some receive attention of the international literature.¹¹ The ones quoted may make use of a particularly innovative incentive mechanism or exhibit other innovative design features. Additionally, public aid programs come and go, often lasting only a few years, making it difficult to keep track of them. Another aspect is that subsidies to employers are much more prevalent and receive much more attention in the area of active labor market policy and in the promotion of employer-provided initial vocational education.

3.2.1 *Tax incentives*

28. Tax-incentives are widespread. For instance, tax incentives for enterprises exist in 15 member states of the EU (see CEDEFOP, 2009c, p. 23) and 23 US states (see Hollenbeck, 2008, p. 4). Comprehensive public evaluation, however, is “practically non-existent” (*ibid.* p. 100). As tax incentives are not the major focus of this report, we only briefly discuss four examples.

29. In the **Netherlands**, a tax law was implemented in 1998 (Source: OECD, 2004; Leuven/Oosterbeek, 2004, pp. 3-4), according to which firms can claim 120% of their training expenditure as a tax deduction (plus 20% on the first 60 000 DLG spent on training if total spending does not exceed 250 000 DLG). For training workers who are at least 40 years old, the deduction is even 140%. Leuven/Oosterbeek (2004) show, however, that the instrument was incapable of increasing training. Training was merely redistributed from workers slightly below the age of 40 to those fulfilling the age requirement or postponed to the day workers turned 40. In fact, the analysis of Leuven/Oosterbeek (2004) even highlights a rather negative effect in overall training provision (p. 482), a result they describe as “discouraging” for policy makers.

30. In 2000 **Austria** introduced by federal law tax incentives applicable to training for all employees and to a wide range of training activities (Source: OECD, 2004, pp. 31-42, 95-96; CEDEFOP, 2009b, pp. 31, 90-95). In addition to deducting actual training cost from the tax base, employers can choose between an extra allowance of 20% of training cost or, alternatively, a direct tax credit of 6% of training cost. The latter has been conceived to provide an incentive to enterprises that make too little profit to benefit from the tax allowance. To be eligible for the allowance, training must be provided by a training organization independent of the company claiming the allowance or by an organizationally independent department of that company. The direct tax credit requires training to be external. At the maximum, EUR 2 000 per day may be claimed as the allowance, regardless of how many workers have participated. The OECD (2004) does not provide evaluative figures, but states that this instrument has strengths in providing “a clear incentive to companies” [...] “without creating a huge administrative and bureaucratic burden”. In the beginning, awareness of the instrument on the part of employers was lacking. However, it seems that the training market has solved this problem autonomously, with providers advertising the instrument heavily to promote their courses. Overall, the instrument is quite popular with Austrian employer organizations (CEDEFOP, 2009b, p. 41).

31. **France** established a tax credit for SMEs in 2006 (Source: CEDEFOP, 2009b, pp. 54-55, 58-60). Training must be strongly related to the employees’ position in the company and be delivered by listed and approved providers. The credit covers ten hours of training per employee at an hourly cost of up to EUR 75. Additionally, contributions to a company savings plans established in agreement with the employees are deductible. Public subsidies are discounted from the tax credit. The ceiling is set to EUR 5 000 per enterprise during a period of 24 months. Apparently, French employers are not all convinced of the scheme’s value: important employer organizations argue that tax incentives generate distortions between enterprises. Instead, they would prefer alleviation of corporate profit tax in general.

32. The region of **Flanders** employed a tax incentive during the years 1999 through 2001 (Stone, 2010, p. 19; EIM/SOER, 2005, pp. 54, 85, 94ff.). Firms were permitted to apply an amount equivalent to training expenditures for employees as a reduction on property tax, if they could prove (a) that training expenditures in 1999 were higher than those of the preceding year, (b) that the size of the workforce remained stable over the last two years, (c) that the tax savings had been reinvested in training for employees within one year. Only specific sectors with poor training incidence were targeted by the instrument, namely: industry, construction, transport, employment offices, cleaning firms and ICT related companies. According to Stone (2010, p. 19), eligible forms of training included internally-organized informal training.

33. This “Vlamivorm” project has been viewed in the literature as being rather successful in targeting small enterprises: 73% of participating firms were small, 11% medium-sized, and 16% large. However, when interpreting these figures one should also take into account the skewed distribution of firm size in the population. Also, training intensity was higher in small companies as opposed to medium-sized and large ones: they provided 40% more training hours per full-time equivalent. Nevertheless, more than 60% of the expenditures claimed as tax reductions were incurred by large firms, and only about 20% by small ones. Even though deadweight loss has not explicitly been assessed, the instrument is rated rather positively in EIM/SEOR (2005). It is presumed to have contributed to a substantial rise in employers’ training efforts. A critical prerequisite for this success is seen in the firm’s obligation to prove that it has increased its training spending. Further, the coverage of informal training activities is said to have been crucial for reaching SMEs. The bulk of training was provided internally (in small companies: 65%).

34. In some countries, tax incentives have failed – often because they were not taken up by enterprises – and were abandoned in consequence. Examples include Brazil (Johanson, 2009, p. 69; Gasskov, 1994, pp. 117-120) or Chile (Johanson, 2009, p. 33). Also, Quebec employed a tax credit until 1990, which was disappointing (OECD, 2003, p. 131): only 2.5% of employers used it.

3.2.2 Grants

35. In **Ireland**, the Training Support Scheme (TSS) was established in 1990 to encourage and promote training in small and medium sized firms (EIM/SOER, 2005, pp. 109-114 [based on: O'Connell/Lyons, 1995]). Enterprises able to demonstrate the existence of training needs and their linkage to approved business development plans could apply for grants on a 'first-come first-served' basis. The subsidy was graduated by firm size: as of 1992, for firms with less than 50 employees, up to 65% of training costs were funded; for firms with between 51 and 200 employees, up to 50%; and for firms with between 201 and 500 employees, up to 25%. Coverage was provided for direct training costs only, *i.e.* fees, not for trainee wages. Priority areas of support were strategic planning, marketing and languages, management, productivity, information systems, quality/service, technology and finance. The scheme was executed by FAS, the Irish Training and Employment Authority.

36. The TSS was evaluated in 1995. Obviously, almost all participating firms were satisfied with the results of the government-aided training. The popularity of the scheme has been attributed to its demand-led design, which gave firms a) the chance to receive grants suited to their individual training needs, and b) the freedom to decide from which provider to purchase the training. However, there appear to have been substantial windfall gains to large enterprises. Only 27% of such enterprises stated in a survey that they would have engaged in either no or less training in absence of the subsidy. Small firms, on the contrary, said they would have offered less or no training in 55% of the cases. Another downside of the scheme is the short average training duration of four days. This duration was found to be too short to actually achieve the aim of the program. Finally, administrative costs were found to be high, leaving only 69% of the total budget for training grants. In spite of these shortcomings, the program has been considered to have met its overall goal of increasing the level of training activity. Nevertheless, it was abolished in 2003, without explicit reasons for its termination being stated. The successor program, the competency development program, allows the FAS to approve training providers and thus to exert more direct influence on the types and contents of employer-provided training.

37. Another evaluation of training subsidies in **Ireland** is given by Görg/Strobl (2005). Their study, however, seems to refer to a different instrument, namely, grants provided under the Industrial Development Act dating from 1986. These provide support "for the training of persons for positions of supervision or management [...] or for the engagement of instructors, technical advisers or consultants to training persons for such positions" (p. 6). The grants cover 100% of training expenses. Training projects must prove the need for financial assistance, viability, and the ability to generate or maintain employment in Ireland. Technology intensive projects are favored over others.

38. Apparently, training in small enterprises is only a little more highly subsidized (as a percentage of training cost) than training in large enterprises (Görg/Strobl, 2005, p. 10). For medium-sized firms, the relative public contribution is the highest. Overall, Görg/Strobl (2005) find evidence that the grants are able to stimulate private expenditure on training. At least, this is true for domestic Irish firms. Foreign-owned multinational enterprises, on the other hand, seem to use the grants to finance training they would have sponsored anyway. Görg/Strobl (2005), however, neither tie their findings of success and failure down to the design of the investigated policy instrument, nor offer any assessment of the instrument at hand.¹²

39. In 2005, an evaluation of various 'in-company training measures' in **Ireland**, co-funded partly by the European Structural Fund (ESF) and the European Regional Development Fund (ERDF), was provided by the Evaluation Unit of the National Development Plan (NDP) / Community Support Framework (CSF) under the aegis of the Department of Finance (Source: NDP/CSF Evaluation Unit, 2005). These measures financed training for employees and other training-related activities under the Employment and Human Resources Development Operational Programme (ERHD OP) and two regional operational programs (Entrepreneurial and Capability Development sub-measures). There were various implementing bodies for the ERHD OP (the Training and Employment Authority [FAS], Enterprise Ireland [EI], and the Department of Enterprise, Trade and Employment [DETE]). The Entrepreneurial and Capability Development sub-measures were delivered by 35 County Enterprise

Boards (CEBs). The resources available for all these measures totaled EUR 362 million during 2000-2006. One of the largest programs in terms of available financial resources was the previously described Training Support Scheme (TSS) implemented by FAS, which was followed by the Competency Development Program (CDB).

40. Expenditure was far below target under the EHRD OP by 2004. The output of the Entrepreneurial and Capability Development sub-measures, in turn, was well in line with targets. Altogether, the authors found that deadweight effects among firms assisted by EI or CEBs were relatively low compared with “similar previous studies”, yet still of some concern. Satisfaction levels with training provided due to the support were reasonably high among the participants. EI support was criticized because it tended to focus on firm-specific training for which there is only a marginal economic rationale. CEB support, in turn, aimed at micro-enterprises and was of a more general character, and thus was based on a more robust rationale. CEBs also had the advantage of proximity to local labor markets and being able to tailor its programs to clients’ needs. A major problem was seen by the evaluators in potential target group overlaps between the different implementation bodies, and in the risk of inefficiency due to duplicating training support. Thus, the evaluators see a need for better coordination among the different delivery agencies.

41. In **Lithuania**, training grants existed until 2008 (Source: CEDEFOP, 2009a, p. 62 [based on: Public Policy and Management Institute, 2008]). Unfortunately, no information on the design of the instrument (*e.g.* approval requirements and subsidy rates) is given in CEDEFOP (2009a). We know, however, that employees of SMEs, socially disadvantaged groups and employees in specifically needy regions were given priority. Evaluation revealed the following positive results: trainees and employers were satisfied with the gained skills and were able to apply them immediately after training; employers felt that training had contributed to productivity, product quality, or cost reductions; trainees’ attitudes towards further training became more positive. In contrast to these subjectively measured perceptions, rather objective output indicators, however, unraveled a couple of unfavorable trends: (a) beneficiaries were mainly large and medium-sized enterprises, better developed regions, major cities, people aged 25-44, and well-educated persons; (b) training was insufficiently relevant for improving employee professional qualifications and did not have a measurable impact on the career and salary of trainees; (c) grant-recipients tended to decrease their private contribution compared with preceding years and employers seem to have developed an appetite for more public support in the future.

42. **Poland** applies a scheme that might be deemed a training fund similar to the ones discussed in section 4 of this work (CEDEFOP, 2009a, p. 63). But this categorization would be misleading. Indeed, the ‘corporate training fund’ introduced by legislation in 2004 encourages employers to voluntarily set aside an equivalent of 0.25% of payroll for upgrading employees’ skills and developing strategic training plans. However, these are firm-level funds that primarily serve to meet criteria for receiving subsidies. The latter covers 50% of the training costs for employees threatened with redundancy, 80% of the training costs for employees on training leave for more than three weeks, and the salary of unemployed persons replacing employees on training leave (up to 40% of average monthly salary).

43. As would be expected, those companies which set up training funds assessed it positively. However, a research project initiated by the Polish Ministry of Labor in 2006 revealed that only 4.3% of the respondents in a survey among employers had created a training fund as a consequence of the law. And 70% said they had no intention to do so in the future. Above all, none of those who had created a fund applied for the subsidy, because they felt it was not attractive enough. A main obstacle was seen in the requirement to cooperate with public employment services, which involved time-consuming procedures and instigated the fear of inspections.

44. In the **US**, the Workforce Investment Act of 1998 authorizes states “to provide customized training grants to businesses for the training of incumbent workers” (van Horn/Fichtner, 2003). Two evaluation studies exist for the Customized Training grants in the state of **New Jersey** (US) (Heldrich Center for Workforce Development/Rutgers, 2008; van Horn/Fichtner, 2003). Both focus on grants

awarded by the Department of Labor and Workforce Development (LWD). Most grants in the Workforce Development Partnership Program (WDPP) were given to individual companies to promote training of current and future employees. Recipients had to match the grants with own resources and prove eligibility for the grant by demonstrating that the proposed training activities would create or retain jobs, upgrade skill levels of employees, or prevent job losses. After reception, modifications of the training programs required approval from the state. Principally, classroom training as well as on-the-job training could be financed. The support for on-the-job training was given as a 50% contribution to employee wages during the learning period. Costs for instructors and materials could be covered. The funds are paid out upon submission of invoices. As the WDPP is funded by the Unemployment Insurance Trust Fund, which in turn consists of a small share of employers' and workers' contributions, the scheme is hardly different from levy schemes employing a cost reimbursement mechanism (see section 4). Indeed, the only reason for listing it in this part of the report is that literature has termed it a subsidy.

45. A first evaluation of grants awarded between 1994 and 1996 (van Horn/Fichtner, 2003) at an overall value of USD 48.7 million revealed that training had a positive impact on the company – at least as perceived by the responsible managers. The supported companies indicated that they had increased the amount of training and that the training had augmented worker productivity as well as firm competitiveness. Further, a clear proliferation of training plans could be observed. Training was received mostly by individuals with only a high school diploma or less and who had a moderate level of skills. Reportedly, for 77% of the surveyed individuals “the training they received through the grant program was the first formal training they had received since completing school” (p. 107). Most interviewed trainees stated that training was beneficial to them and increased job security as well as the chances for advancement. Remarkably, 46% believed that the training did contribute to a rise in earnings. However, wages increased for the majority of workers within two years after grant reception. The quoted study cannot narrow down the extent to which wage increases were actually due to training based on grant reception. Another evaluation of grants awarded from July 2002 through June 2004, worth USD 38 million, produced similar results based on case studies (Heldrich Center for Workforce Development/Rutgers, 2008). None of the studies, however, provided objective performance or efficiency indicators as well as deadweight estimates.

46. Another evaluation is available for the case of **Massachusetts** (US) (Source: Hollenbeck, 2008). As in New Jersey, the employers make mandatory contributions accompanying unemployment insurance tax to the Massachusetts Workforce Training Fund (WTF). In 2006, the contribution was 0.06% of wages taxable by unemployment insurance. Grants must be matched by equal amounts on behalf of the firms. Like in New Jersey, the self-reported evaluation data are largely positive. The bulk of supported firms reported increased productivity and competitiveness. About half of the firms stated that they had promoted workers after training or increased their wages. Hollenbeck (2008) estimates rates of return for employers, trainees and the state and argues that the state's returns are the greatest.

47. Finally, Holzer *et al.* (1993) have provided an evaluation of subsidies in the state of **Michigan** (US) provided under the Michigan Job Opportunity Bank-Upgrade (MJOB) during 1988 and 1989 (Source: Holzer, *et al.*, 1993, pp. 625-636). Grants were given to manufacturing companies with 500 or fewer employees that were implementing new technologies. The average grant size was USD 16 000, only direct cost of training was covered. Grants were given on “a roughly first-come first-serve basis” (*ibid.* p. 626), i.e. fairly independent of firm characteristics, providing relatively fortunate conditions for evaluation compared with many other instruments. Holzer *et al.* (1993, p. 635) argue that their results show a substantial increase in the amount of training due to the grant in the same year, with every extra hour of training costing the state roughly USD 6-7. However, no effect could be observed beyond that year. Training intensity dropped down almost to its pre-grant level. In our view this could be due to the fact that the support was given to companies that were implementing new technologies. Thus, the decline in training investment during successive years may not be surprising after all. Actually, it would be necessary to test whether more firms chose to implement new technologies as a consequence of public aid. Holzer *et al.* (1993) also find “contemporaneous positive effects on the quality of output (as measured by the scrap rate) of grant reciprocity and of training more generally”. However, they were not able to find substantial short-term effects of grants and of training

on sales and wages, possibly because of data constraints. Employment of firms appeared to have increased merely slightly. Overall, Holzer *et al.* (1993, p. 635) reason that the grants may “have achieved the baseline goal of the program, [...] to spur at least a one-time increase in training hours in recipient firms – and did not simply provide a windfall for these firms”. They also argue that this effect of training on quality may be persistent.

48. In **Belgium**, subsidies were available to enterprises for conducting training programs that enhance workers chances in the labor market, if the programs had at least 20 participants, each receiving at least 20 hours of training (Source: Gasskov, 2001, pp. 3-4 [based on: Geers, 1996]). This subsidy from the Leverage Fund for Innovation Oriented Training covered up to 27.5% of total project cost, with the maximum grant for individual training projects amounting to BEF 25 million (BEF 100 billion in the case of collective training projects). Projects for low-skilled workers or long-term unemployed jobseekers were prioritized. The main goal, however, was to mobilize private resources and foster training associated with technological and organizational changes.

49. In the first round of applications, public funding in the amount of almost BEF 300 million was provided for training activities worth BEF 2.9 billion in total. Hence, the instrument is thought to have been efficient in mobilizing money from other sources, the most important one being contributions from enterprises.

50. In the **United Kingdom**, pilot projects with subsidies for employer-provided training have been conducted, such as the Small Firm Development Accounts (SFDA), which were tested during 2002-2003 (Dohmen, 2007 [based on: Hirst, *et al.*, 2005]). To be eligible, companies had to employ between 5-49 people. In the first year, 313 companies participated. These received support for a Training Champion who had to be appointed by each company to develop and implement a training plan. Additionally, in the first year of the pilot project, 50% of the firms’ external training costs were subsidized (at the maximum GBP 150 per employee). 217 of the 313 companies fulfilled the prerequisite for participation in the second round of the pilot and submitted a training plan on schedule. In the second year, the government contribution to training costs was cut to 33% and at the maximum GBP 1 000 per firm. Additional elements in the second round included a grant of up to GBP 350 per person attending an approved management and leadership course, the services of a small business mentor up to the value of GBP 500 for a period of six months, and a 12 months free membership in a Training Network for small firms.

51. According to the results of an evaluation, the pilot project was positively assessed by participating firms and employees. For instance, 90% of trainees felt that their vocational skills had been improved and 80% asserted an increased motivation to participate in training in the future. Companies, apart from the financial motive for participation, appear to have expected benefits from the support and advice in developing structured training plans. The reduction of the subsidy rate in the second year affected the amount or the value of training offered in just under one third of the participating enterprises. More than 70% of enterprises intended to maintain the position of Training Champion. The mentoring program, however, was not very successful as its purpose and organization was not well understood by enterprises. Also, networking events were characterized as beneficial by only every second enterprise on the average.

52. Firms with 5-10 employees accounted for 34% of the participating firms, hence they were underrepresented. Also, the share of firms with less than ten employees that did not participate in the second round was disproportionately high, suggesting that the development of training plans provides more of a challenge to these firms. Further, only 2% of participating enterprises had not previously provided training; thus the pilot project was unable to reach inactive firms. Although the evaluators of the pilot project’s second year support state the opposite (see Hirst, *et al.*, 2005, vii), deadweight appears to have been substantial: only 7% of participating enterprises said that training would not have occurred in the absence of SFDA (p. 34). At any rate, the way in which training occurred did change in more than one third of the cases.

53. Another test of subsidies to encourage employer investment in CVET in the **UK** was conducted with the help of the Employer Training Pilots (Source: EIM/SOER, 2005, pp. 124-127). These pilots were implemented locally in initially six Learning and Skills Council (LSC) areas in 2002, and extended to 18 LSC areas in 2003. The pilots were administered in partnership with various local agencies. They offered free or subsidized training to low levels (level 2 National Vocational Qualifications), paid time-off for training for employees, wage compensation for employers, and information and advice. The pilots were found to be successful in EIM/SOER (2005). Apparently, they generally involved small employers, partly “hard-to-reach” ones, who were highly satisfied with the benefits from the projects. At the same time, many individual learners were early school leavers with hardly any positive learning experience, who were also “relatively positive” about the training. The support of indirect training costs (time-off work for employees, wage compensation for employers), in particular, is said to have been crucial for the success of the pilots. Moreover, unions were involved in the pilots to guide learners into training courses. In many instances, union learning representatives were said to have contributed to the success of workplace training.

54. Further, a subsidy scheme exists in **Taiwan**, where firms can receive a 50% grant for in-house training or for sending workers to public training centers (Dar, *et al.*, 2003, p. 16 [based on: Tzannatos/Johnes, 1997, p. 445]). However, it has been large enterprises, in particular, that have benefitted from this opportunity.

3.2.3 *Training vouchers*

55. Voucher schemes are often implemented locally. In the following we discuss some frequently quoted instruments from Belgium, Germany, and France.

56. On Belgian territory, there are two regional instruments: the training voucher for employers in **Flanders** (launched in 2002) and the training voucher for employers in **Wallonia** (launched in 1998) (OECD, 2004, pp. 98-99; EIM/SOER, 2005, pp. 97-99). Both are oriented towards the needs of small and medium-sized enterprises. In Flanders, only enterprises with 250 employees or less are permitted to purchase vouchers. A voucher worth EUR 30 can be purchased by firms for EUR 15, with the remaining value being added by regional governments. Each voucher covers the direct cost of one hour of training delivered by authorized training agencies and must be used within 14 months of issue. In Wallonia, training must take place during normal working hours. Companies may buy up to 200 vouchers a year in Flanders, and 400 a year in Wallonia. Evaluative evidence was not available from the reviewed sources.¹³ However, of the Walloon scheme it is known that almost exclusively white-collar workers benefitted from the voucher. Additionally, in Flanders it was found to be difficult to persuade managers of SMEs to train employees, even though the voucher program targeted this group of firms. A presumed strength of the schemes is the minimum of bureaucratic burden associated with the process of purchasing vouchers online and the accreditation system which ensured that the only training providers admitted are those which comply with certain quality requirements.

57. In 2006, the German federal state of **North Rhine-Westphalia** (NRW) introduced a training cheque for workers in SMEs with up to 250 employees (CEDEFOP, 2009b, pp. 22-24 [based on: Moraal, 2007]; SALSS, 2008). The program is financed by the ESF. The voucher can be supplied either at the employers’ or the employees’ initiative. It covers 50% of training fees up to a maximum of EUR 500. Before receiving a voucher, however, candidate employers or employees must undergo obligatory counseling at approved agencies. Vouchers are available only at those agencies. Apart from this, however, no formal application procedure on the part of employers or employees is required. The only prerequisite concerning the employees directly is that the individuals to be supported with the cheque cannot have already participated in employer-provided training in the current or the preceding year. Employers may receive up to 20 vouchers, employees at the maximum two vouchers a year (or four respectively, when the employer contributes another two vouchers). In principal, vouchers can be handed in at any training institution that is willing to accept and cash them. However, to ensure that counseling activities are neutral, the buyers must select one of three suitable providers recommended by the counseling agency.

58. According to CEDEFOP (2009b, pp. 22-24), just little under 200 000 vouchers had been handed out after two years, worth on average EUR 330. SALSS (2008, pp. 93-97) reports that about 6% of eligible enterprises and 4% of employees in SMEs had been reached by March 2008. Deadweight was substantial: 50% of supported enterprises and 60% of individuals said they would have conducted/undergone the training even in absence of the subsidy. On the other hand, roughly two thirds of the firms and 85% of the employees stated that they had been motivated to pursue additional training. Also, the instrument appears to have been rather successful in reaching the relevant target groups of small enterprises and employees who have abstained from training. 48% of individuals supported by vouchers at employers' initiatives had not participated in vocational training for at least five years. Women accounted for 61% of voucher recipients; 67% of the supported firms had less than 50 employees (CEDEFOP, 2009b, pp. 22-24). Nevertheless, migrants, low-skilled workers, and very small firms with less than ten employees remain underrepresented and benefit rarely from the voucher (SALSS, 2008, pp. 96-97). Altogether, the instrument is viewed as rather successful (CEDEFOP, 2009b, p. 23). Strengths include the minimum of bureaucratic burden on employers and employees, providing an extremely low threshold for training participation. Further, free and obligatory counseling has been argued to constitute a crucial element, because it eases access to training even for individuals or firms with no idea of their training needs.

59. The Training Cheque in the French region of **Limousin** addresses employees of small and medium-sized enterprises *inter alia* (Source: OECD, 2004, p. 106). Employers can complete the application on behalf of their employees. This may give them the chance to exploit the measure for their purposes. Eligible forms of training encompass language and IT courses. The vouchers correspond to one course module, including 14-21 hours of IT training or 40 hours of language training. Coverage is provided to the training providers for the direct cost of such courses as soon as beneficiaries sign up. The latter may select the training provider from a list of approved providers, each of which has agreed to the conditions of voucher-based training. The vouchers are valid for six months.

Another voucher exists in **Italy** (Source: Dohmen, 2007, p. 30). It requires the development of a training plan which sets out individual training paths for employees. Italian regions have some autonomy in deciding on the specific focus and design of the vouchers. The instrument appears to be especially valuable for SMEs, which receive most of the vouchers.

3.3 *Assessment*

60. According to the OECD (2003, p. 85), the level of public support for education and training does not appear to be clearly related to training participation rates, except for the low-skilled where public spending can obviously make a difference. On the other hand, authors have argued that subsidies may be an effective tool to raise the level of enterprise training provided to employees. Holzer *et al.* (1993, p. 635) reason that “public sector funding for private sector training in firms has the potential to raise the amount of such training substantially without producing large windfalls for these firms, and also to generate other positive product and labor market outcomes”. Additionally, Hollenbeck (2008, p. 21) maintains that the returns to states from training subsidies are substantial and may be indicative of underinvestment. Whatever ultimately turns out to be true: we hold that effectiveness, administrative burden, and deadweight as well as the possibilities of targeting specific groups obviously vary between the different types of subsidies.

61. The authors of relevant literature usually concede that tax incentives entail little administrative burden for employers. According to CEDEFOP (2009c, p. 101) they can “be regarded as helping to raise the overall involvement [...] of enterprises” and to be “relevant and efficient instruments for reducing aggregate under-investment in education and training”. However, a couple of aspects have been mentioned on the downside of tax incentives (see for instance EIM/SOER, 2005, pp. 67-71; National Skills Forum, 2007; CEDEFOP, 2009c, pp. 13, 102-105; Stanfield, *et al.*, 2009, p. 32). Most importantly, they are said to lack effectiveness in terms of stimulating additional training and to be accompanied by deadweight effects. In specific, tax schemes often fail in targeting specific groups of workers or enterprises, and thus are an appropriate choice only to overcome aggregate

under-investment. Even if targeted at small enterprises and low-skilled workers, in practice they frequently favor large enterprises and highly educated individuals. Those groups are also the ones most likely to be aware of the existence of tax incentives. Implementing targeting procedures, in turn, would exacerbate bureaucracy or – as shown by Leuven/Oosterbeek (2004) for the Dutch case – lead to unintended substitution effects across groups. Furthermore, uncertainties as to how training expenses will be treated by tax authorities may erode employers' willingness to provide training. Finally, in years of low profit expectations (*e.g.* during economic crises) tax incentives may not function well enough. This is unfortunate, as opportunity costs of training are actually low during times of idleness. Tax incentives are said to work best when combined with other policy measures and thus should be considered merely as a supplementary tool; tax incentives should be targeted on groups that tend to participate less in training (on the employer-side as well as on the employee-side); the financial stimulus must be substantial; information should be disseminated so that the targeted group knows of the opportunity; monitoring and evaluation of tax incentives is needed to understand effectiveness and efficiency of the instrument.

62. Direct subsidies may be more effective than tax incentives and may facilitate the targeting of specific groups of enterprises and employees. That might make it easier to reduce deadweight effects. In EIM/SOER (2005, pp. 68-71), the Walloon and Flemish training voucher and the Irish Training Support Scheme are listed as positive examples. On the other hand, systematic targeting may be administratively complex (OECD, 2004, p. 48). Another shortcoming of subsidies according to Smith/Billet (2004, p. 9) is that they may “become accepted as the norm and thus encourage dependence”. This has, for instance, been reported as a side-effect of the Lithuanian instrument. Regardless of whether subsidies are bestowed directly or indirectly, they entail the risk of resulting simply in a change of the types of training offered instead of actually increasing the amount of training. For instance, informal learning and on-the-job learning might be crowded out if formalized or certified training is treated preferably by subsidization schemes.¹⁴

63. Also, there appears to be a trade-off between the goals of reducing red tape and reducing deadweight effects, as the latter requires more comprehensive eligibility criteria and approval processes. Instruments with a minimum of red tape may result in high deadweight effects (or even in abuse practices, see EIM/SOER, 2005, pp. 64, 68). On the other hand, more complicated application procedures can result in windfall gains to those enterprises with sufficient administrative capacity.

64. A couple of success factors have been described in the report of EIM/SEOR (2005). Here, we mention the ones that are relevant for subsidies for employers. First, instruments as well as the benefits of training must be communicated adequately to create awareness among potential beneficiaries. Second, special attention must be given to SMEs, as these are usually more reluctant to provide training. Third, administrative burden must be reduced. Fourth, incentives should be substantial, *i.e.* the training to be stimulated must be recognized by enterprises as actually pertaining to their needs and improving their economic situation or performance noticeably. It has been suggested that increasing the private contribution required to obtain subsidization could reduce deadweight effects (*e.g.* Public Policy and Management Institute 2008 as quoted in CEDEFOP, 2008, p. 62).

65. Holzer *et al.* (1993) explain that subsidies may only make sense in the presence of certain conditions: “Of course, the case for such funding must ultimately rest on a more thorough evaluation of social costs and benefits, or on some clearer evidence of market imperfections that may prevent firms from achieving optimal investments on their own” (p. 635). Similarly, the evaluator of the Irish ‘in-company training measures’ (NDP/CSF Evaluation Unit, 2005, vi) recommends that interventions be “explicitly targeted at areas of clear market failure”, such as “programmes aimed at older workers and employees with lower skills levels, smaller firms and interventions aimed at overcoming information barriers on the part of companies and employees about the benefits of training”.

¹ The Swedish ILA scheme, for example, was thought to leave these decisions to individuals. Employers would have been permitted to make deposits to the accounts and deduct them from their tax, but not to influence how individuals use the sums saved. The model was not introduced after all (Source:

CEDEFOP, 2009b, p. 12). Similar ILA schemes existed in the UK, and on an experimental basis in the Netherlands (see OECD, 2004, pp. 119-123, 134-135; EIM/SOER, 2005, pp. 115-118).

- ² For instance, the Australian state subsidizes group training companies that take on responsibility for the employment of apprentices and trainees, their placement with “host” employers as well as management of training. This way, employers are given the chance to participate in training provision without facing extensive contractual and administrative liabilities (Gasskov, 2001, p. 3).
- ³ For instance, direct subsidies exist in Australia due to the New Apprenticeship Incentives Program (Source: Gasskov, 2001, p. 3; OECD, 2004, pp. 89-91). But they mainly relate to apprenticeships and traineeships, *i.e.* initial vocational education. Payments to enterprises are made based on (a) beginning of apprenticeships and traineeships at certain qualification levels, (b) the apprentices’/trainees’ progression to higher levels, and (c) completion of their training. Further, incentives are provided for the training of specific target groups.
- ⁴ There may be other motivations for training subsidies, such as, for instance, capital market failure. The latter, however, primarily provides a rationale for subsidies to individuals.
- ⁵ A considerable number of such schemes exist in Germany, on the state level as well as on the national level (Koscheck, *et al.*, 2011). Also, Austria has an individual learning voucher, which the Chamber of Labor issues to its members (EIM/SOER, 2005, pp 92-93; [based on: Schlögl/Schneeberger, 2003]). An inspiring experiment in Switzerland provides useful findings on the potential effects of individual training vouchers and meaningful program design (Schwerdt, *et al.*, 2011; Wolter/Messer, 2009). Despite the fact that the programs are addressed to individuals, enterprises may attempt to exploit such subsidization for their purposes by convincing employees to apply for funds instead of financing training out of the enterprise budget. The same may be true in the case of individual learning accounts.
- ⁶ The Employer Training Pilots in the UK (discussed later in this report), covered direct training costs and offered compensation for employee wages during training absence.
- ⁷ An evaluation study on such a scheme in Denmark is given by Westergaard-Nielsen/Rasmussen (1999).
- ⁸ In a couple of schemes, paid training leave is financed through the levy proceeds (see section 4).
- ⁹ One such scheme is the Small Firms Training Loans Scheme, which operated in the UK from 1994-98. It has been evaluated by Maton (1999) (see Dawe/Nguyen, 2007, p. 16).
- ¹⁰ Tax exemptions stipulate that some particular income is exempted from the tax base. They are primarily applied to encourage individuals’ training investments. Other, less frequently used, tax incentives are tax reliefs, which stipulate lower tax rates for certain taxpayers or activities, tax deferrals, which permit postponing tax payments (see CEDEFOP, 2009c, p. 21). All the mentioned tax incentives can pertain to corporate tax, personal income tax, or value-added tax. Tax incentives pertaining to value-added tax concern the services offered by education and training providers. Such incentives benefit enterprises, too, by reducing the cost of education and training.
- ¹¹ For instance, Duscha/Graves (2007, pp. 4ff) show that in 2006, 47 state programs existed in the US, training covering about 1 million people at a cost of USD 571 million. Nearly 60% of the resources are spent on training for incumbent workers. Program evaluation, however, is found to be “almost non-existent”.
- ¹² Obviously, this is because the underlying goal of their study is not to evaluate a specific policy instrument, but to look for evidence on market failure.
- ¹³ In EIM/SOER (2005, p. 98), however, it is said that evaluation took place in 2004.
- ¹⁴ Note that there is a terminological difficulty with on-the-job-training (OJT). In parts of the literature, OJT is defined as planned periods of training, instruction or practical experience in the work place. In other parts of the literature, OJT means any period of planned instruction related to a job and financed at least partly by the employer. This may or may not be training at the workplace. Throughout this paper, we use the term in the first sense.

4 LEVY SCHEMES

4.1 *Instrument types*

66. Levy schemes are the principal source of financing for training funds, in which the latter are “a dedicated stock or flow of financing outside normal government budgetary channels for the purpose of developing productive skills for work” (Johanson, 2009, i, p. 3). However, there can be other sources of money as well. For instance, funds may be derived from social security contributions. A mixture of sources is possible, too: *e.g.* governments could contribute to funds mainly generated by a firm levy. Hence, levy schemes go along with funds, but funds do not necessarily have to involve a levy. In this section, the focus is on obligations requiring firms to contribute to trainings funds, *i.e.* on levy schemes.¹ Or more precisely: The focus is on training funds that are at least partly based on a firm levy, whereby a firm levy is understood as an earmarked entrepreneurial contribution to training funds. Reviews of national training funds or levy schemes as well as summaries of evaluative evidence regarding such instruments have been compiled by Johanson (2009), CEDEFOP (2008), and Dar *et al.* (2003). Much in this part of the report is based on these reviews. However, other sources served to complete and supplement the available information. For instance, Gasskov (1998) and Ziderman (2003) provide thorough discussions of levy types, their characteristics as well as advantages and disadvantages.

67. The politically declared intentions of levy schemes vary. Usually, these declarations make reference to goals such as improving the quality of the workforce, enhancing international competitiveness of a country’s firms, or supporting the restructuring of the economy. Whatever else, however, levy schemes always aim at increasing the financial contribution of enterprises to training. Apart from that goal, they pursue manifold other objectives (see Johanson, 2009, i), such as ensuring more equitable access to enterprise training, pooling funds from various sources, improving the quality and relevance of training, and developing competitive training markets. Unlike subsidies, levy schemes ensure a reliable training budget that is independent of public sources of funding. Apart from that, training funds set up in connection with levy schemes have a different set of motivations: Underinvestment is suspected because of the “free-rider” problem that accompanies rival public goods, meaning that firms may opt for “poaching” trained workers from competing firms instead of investing in training themselves. Such behavior would reduce training incentives for other firms, too, resulting in an overall under-investment (see Johanson, 2009, pp. 27-28).

68. The design of levy schemes (and training funds) is not uniform. There is an abundance of different schemes that vary, for instance, along the following dimensions:

- recipients of funds (employer, training providers, training participants)
- targeted individuals (apprentices / unemployed / employees / disadvantaged groups)
- generation and disbursement of funds (revenue-generating / cost reimbursement / levy exemption / levy grant)
- coverage of levy scheme (universal / sectoral / regional)
- structure of funds (universal / sectoral / regional)

- initiative (public initiative based on national or local law / (inter)sectoral agreement between social partners / tripartite agreement / employer initiative),
- funds management/governance (public sector, employer-led, bipartite, tripartite)
- source of funds (firm contributions only / government contribution)
- collection method (social security agency / funds managing agency / tax administration)
- type of levy (percentage of payroll / fixed amount per worker or working hour / percentage of profit / percentage of production value / others)
- graduation of levy (by firm size / by payroll scale / by height of profit / by sector)
- obligation to contribute (mandatory / voluntary)
- location of training (within company / outside of company)
- eligibility of training (courses of approved training providers / education and training leading to recognized qualifications / courses designed by firms according to given stipulations / other training forms)

69. These aspects can vary independent of each other. Hence, in theory, levy schemes and funds could show manifold combinations of the possible variations in these dimensions. For instance, firms might either have to pay a fixed percentage of payroll or a fixed amount per worker in a levy-grant scheme. Independent of what serves as the basis for assessment, the levy might be staggered by firm size or in connection with a different indicator like payroll or profit. Even within dimensions, a scheme may take on more than one specific variation. For instance, cost reimbursement can be applied parallel to levy exemption mechanisms or grant disbursement. Hence, drawing a sharp line along these dimensions is impossible, although in practice some combinations of design elements are more frequent than others (for instance, in revenue-generating schemes the levy is often collected by the funds managing agency which is also in charge of training; levy-exemption schemes frequently utilize tax authorities). In the following, we will discuss some of the listed aspects at greater depth.

70. The spectrum of training funds and levy schemes includes models that benefit training providers or training participants and do not provide for enterprises as beneficiaries. For instance, Johanson (2009, pp. 43, 94-98) discusses the case of Papua New Guinea, which established the Skills Development Trust Fund to support providers and participants using the interest generated.² Similarly, in the case of Cambodia, the government-financed training funds benefitted training providers and micro-entrepreneurs, though a long-term goal for the instrument is to provide incentives for enterprise-based training, too. Corresponding to the aims of this report, only those funds are considered that disburse money to employers and encourage them to provide training for their employees.

71. Johanson (2009) uses the information regarding the group of individuals to be trained with support of the funds (the second aspect in the list) to distinguish three main types of funds: pre-employment training funds, equity funds, and enterprise training funds.

72. The concept of pre-employment funds is not defined explicitly by Johanson (2009), but from his choice of examples we can infer that the concept must include funds for financing initial training for apprentices, training for disadvantaged youths, and continuing training for unemployed workers (as in the presented case for Brazil). According to Johanson (2009, p. 19), their main goal is “to increase the supply of well trained individuals in the labor market”. It also appears that the concept is used to characterize funds supporting training in public institutions (for individuals not currently employed) in contrast to funds supporting training within companies (for firms’ employees). Hence, employers are usually not among the direct beneficiaries of pre-employment funds. The latter exert benefits to enterprises merely indirectly by supporting the establishment and operation of pre-employment

training institutions and thereby improving the recruiting situation in general. Therefore, pre-employment funds are beyond the scope of this paper, unless they also spend a share of their resources for directly encouraging employers to invest in continuing training for their employees. Pre-employment funds can be found mostly in Latin America.

73. The concept of equity funds describes funds which particularly aim at reaching “people who cannot benefit normally from levy-financed schemes”. They “focus on training for the informal sector and disadvantaged groups” (Johanson, 2009, pp. 33-34). Equity funds are prevalent especially in low-income countries or disadvantaged segments of middle-income countries. They are sometimes financed by governments or a levy scheme, but more often by donors. If financed by governments or donors, grants out of these funds are equivalent to subsidies and pertain to chapter 3 of this report. To be eligible for the present section of the report, equity funds must be financed at least partly by employers. Furthermore, we consider such funds in this section only if they reserve at least a share of their financial resources for grants to employers instead of employees, even though the latter may be the main beneficiaries of the training activities.

74. The concept of enterprise training funds in the terminology of Johanson (2009, p. 24) applies to funds “increasing the incidence of training within firms”. However, this definition includes funds that also promote initial training. Moreover, it excludes employer-financed funds that provide support for firms to provide continuing training outside the company. Hence, none of Johanson’s concepts fit the scope of this report well. Nevertheless, the last concept exhibits greater overlap with our subject than the first two concepts.

75. Training funds may not even engage in the financing of training, but in the development and testing of sector training programs. Such is the case in Denmark, where sectoral training funds have arisen from collective agreements but are relatively unimportant in terms of financing CVT, as the bulk of training is provided by the public sector (see CEDEFOP, 2008, pp. 43-52). Here, we consider only funds that directly encourage the provision of training.

76. In general, funds either generate revenues to finance public sector training institutions or disburse the money back to employers via different incentive schemes to encourage entrepreneurial training activities.

77. Revenue-generating levies are usually employed for pre-employment funds in the terminology of Johanson (2009), with an emphasis on initial training at formal public training institutions (see Ziderman, 2003, p. 9). Their rationale is to provide a “sheltered and reliable source of financing training” (Gasskov, 1998, p. 28) and to increase the supply of training, as opposed to incentive-based schemes that are intended to stimulate demand. Proceeds are often, but not necessarily, generated through unemployment insurance taxation. However, many schemes are hybrids and pursue different purposes. Revenue-generating schemes may deploy a share of their resources for continuing training (within or outside of enterprises) as well. Hence, in this report, revenue-generating schemes may be considered even though they put strong emphasis on pre-employment training, if they also serve the purpose of promoting continuing training.

78. Incentive-based levy schemes are typically differentiated further by their disbursement mechanism. Gasskov (1994) distinguishes cost reimbursement schemes, cost-redistribution (or levy-grant) schemes, and levy-exemption schemes (often called “train-or-pay” schemes). In contrast to revenue-generation schemes, these constitute stimuli to the demand-side (see OECD, 2004, p. 28), providing incentives for employers to invest in the development of skills on the part of their work force (incentive-based levy schemes). Ziderman (2003, pp. 91-94) explains them in detail:

1. Cost reimbursement schemes basically aim at the reimbursement of training expenditures that have been incurred. However, only part of the training expenditures – usually a fixed fraction of the levy paid – can be compensated, because administration cost need to be covered, too. Reimbursement is usually subject to the provided training complying with certain approval requirements.

2. Levy-exemption mechanisms are being applied to reduce the bureaucratic burden associated with paying the levy and claiming reimbursement of training spending. Here, firms can withdraw from paying the levy to the extent they have already made investments in the training of their personnel. This scheme fosters employer satisfaction by granting them a high degree of freedom in planning their training at low levels of bureaucracy. Typically, levy-exemption schemes are supervised by tax authorities or the ministries of labor (Gasskov, 1998, p. 29).

3. The levy-grant mechanism, instead, aims at redistributing the financial burden of employer-provided training: Grants are provided according to specific priorities to companies that train. Because the granted amount can be significantly higher than the levy paid, this scheme provides a strong incentive to engage in training (Ziderman, 2003, p. 52). Grant schemes allow for the implementation of detailed approval criteria for training activities.

79. On the one hand, the initiative for the establishment of a levy scheme may be taken by government based on national legislation. In most of these cases, levy stipulations are universal and apply to all enterprises in the economy. Nevertheless, coverage can be limited to specific sectors or regions. At any rate, contributions in these schemes are compulsory. Often, contributions accrue to one and the same fund. In quite a few cases, however, funds are structured by industry sector (and/or region). The sectoral structure can be explicit, if separate funds exist for each sector, or implicit, if the funds pool resources from multiple sectors, but feature a sectoral dimension in collecting and/or allocating the funds (see CEDEFOP, 2008, p. 26). As an alternative to public initiatives, such schemes can also originate from tripartite agreements. On the other hand, training funds may emerge without any government participation, having been adopted by a single industrial sector or by a few sectors based on bipartite (*i.e.* social partner) agreements. Contributions to these funds can be compulsory under state law or may be mandatory under private law. Indeed, calling levy schemes that operate under national or regional laws compulsory may be misleading as sectoral training levies based on collective agreements are mandatory, too. Only in very rare cases are firm contributions genuinely voluntary. Often, however, a waiver option is in place for firms with less than a certain number of employees or with a payroll lower than a given amount.

80. In general, this paper is concerned with policy instruments for government. Hence, levy schemes based on sectoral or intersectoral agreements are in principle beyond the scope of this project. However, governments may choose to provide support to social partners if they agree to introduce a training levy, as is the case in the UK (OECD, 2003, p. 132). Or they might want to ratify social partner agreements by tripartite agreements as in the case of Spain (*ibid.*). For this reason, the performance of bipartite training funds is of great interest for policy design. That is why the report gives attention to some cases, in which a national system of sectoral funds exists. *I.e.*, cases where funds agreed upon by social partners are not limited to a few sectors, but cover the bulk of enterprises in an economy.

81. Finally, the initiative may be taken by regional governments, as is the case in Quebec (Canada). Whether levy schemes are implemented at the national or regional level depends to a great degree on whether or not a federally organized political system is in place.

82. Another important characteristic of training funds concerns the governance of training funds. Usually, there are funds managing agencies – possibly structured sectorally and/or regionally – which are responsible for determining training strategies and priorities (sectoral or national), putting forth principles for training approval, and the collection, as well as disbursement, of funds. When the government took the initiative in establishing the funds, these agencies may be governed by the public sector. In such cases, the agency often also takes on the role of a public training provider. Frequently, however, the boards comprise equal numbers of employer, worker and public sector representatives (tripartite). Where funds have emerged without government intervention, bipartite boards are common. There are, however, employer-led training funds as well.

83. Finally, there are several different types of levy. While enterprise contributions are typically assessed based on payroll (or less frequently: on the number of workers or working hours), some schemes employ different scales, like company profit, production value, or sales. Also, levy rates may be graduated by sector, number of employees or payroll scale. Funds collection can be organized and supervised by the funds managing agencies themselves. Frequently, however, the latter utilize the existing administrative capacity of tax authorities or the social security service. Some funds may rely solely on the mobilization of private resources; others are supplemented by government contributions.

84. As said before, in practice the schemes differ along various criteria, partly depending on the specific objectives and conditions in the country as well as historical aspects. Hence, no training fund is just like another and it does not really make sense to aggregate them and strictly distinguish certain types. For an assessment of effectiveness, attention should instead focus on the listed characteristics rather than on types, because any typology would still encompass a great deal of heterogeneity within its categories.

4.2 *Evaluative evidence*

85. Training levies are not new at all. In France, for instance, enterprises have been obliged to pay an equivalent of 0.5% of wages and salaries as an apprenticeship tax since 1925 (Smith/Billett, 2005, p. 107). Accordingly, they are widespread nowadays. Dar *et al.* (2003, p. 5) identify more than 30 countries “where levy schemes exist or have existed in the recent past”. Johanson (2009, pp. 64-67) based on other sources (inter alia CEDEFOP, 2008; African Development Bank/OECD, 2008; Zideman, 2003; Masson, 2005; Dar, *et al.*, 2003; Galhardi, 2002) lists 62 countries and gives details on the levy rate as well as the funds generation and disbursement mechanism. The list includes 17 Central and Latin American and Caribbean countries, 17 countries from Sub-Saharan Africa, and 14 from Europe. Fewer training funds, but still some, can be found in Middle East, North Africa, Asia and the Pacific Region. However, only a few instruments that encourage firm investment in their employees’ training evaluation studies exist. Dar *et al.* (2003) state: “[...] rigorous evaluations of the effectiveness of levy programs are extremely uncommon”. Analyses are mostly limited to comparison of outputs and targets (e.g. related to the number of persons trained). Similarly, CEDEFOP (CEDEFOP, 2008, p. 180) states that “there is little robust research about the effectiveness of levies, despite the central role they may play in the training system in various countries”. Net impacts are rarely discussed (Johanson, 2009, v, p. 50). For instance, Dar *et al.* (Dar, *et al.*, 2003, p. 6) found only “a handful of evaluations, few of which were rigorous”. Those authors do eventually present at least some evidence on the effectiveness of 13 levy schemes.

86. Subsequently, this paper will present a couple of instruments for which at least some information on the design is available and that have either been evaluated in terms of effectiveness and efficiency, assessed based on output-target comparisons, or commented on in terms of strengths and weaknesses by expert authors in the reviewed literature. We start with few examples of pre-employment and equity funds which devote part of their resources to firms’ continuing training activities and will then turn to enterprise training funds. Table 1 lists the countries in question and includes the most important characteristics of the respective instruments.

4.2.1 *Revenue-generating training funds*

87. **Brazil** possesses the oldest revenue-generating training funds, introduced as early as 1942 (Sources: Johanson, 2009, pp. 19-21, 67-72; [inter alia based on Atchoarena, 1996; de Moura Castro, 2000]; Gasskov, 2001 [based on: Leite, 1995]; Leite, 2007). It imposes a 1% payroll levy on all industrial enterprises. Companies with more than 500 employees have to pay an extra contribution of 0.5%. The budget is complemented by government subsidies. The money is used to finance the National Industrial Apprenticeship Service (SENAI), a sectoral training agency managed by the employer-side (National Confederation of Industry). It is regionally structured and operates more than 500 training centers (partly as joint-ventures with industry). Along with pre-employment training, continuing training is provided and training services are offered to enterprises. The scheme is supplemented by a possibility for exemption: it allows companies to withdraw from paying the levy

and to pursue their own training program and operate their own institutions. For this purpose, a so called co-financing agreement must be reached between SENAI and the respective enterprise. More than 2.8 million people are trained per year.

88. Four other training funds exist in Brazil, two for the sectors of commerce (SENAC) and transport (SENAT), one for small enterprises (SEBRAE), and one for rural areas (SENAR). The basic structure of SENAC and SENAT is identical: enterprises are charged 1% of their payroll and the training institutions are governed by the employer-side under private sector status. However, SEBRAE and SENAR were initially government institutions which were privatized in light of various problems, one of which was inefficiency. Unlike the other training services, SENAR has a tripartite board and charges a 2.5% tax on the sale of agriculture products. SEBRAE imposes a 0.3% levy across all sectors. Also, these two services do not own training centers themselves, but buy training in the market. The training agency in the transport sector (SENAT) provides training via satellite instead of using training centers.

89. Evaluative statements were found in literature only for the levy-financed service SENAI, the original, if you will. Even though it is said to monopolize the training market, favor large companies and provide few incentives for the training of low-skilled workers, the service appears in a positive light in Johanson (2009, pp. 20, 70-71). Its prestige is high in the Latin American and Caribbean countries and Dar *et al.* (2003, p. 14) report that training has gone up substantially. As strength, the literature mentions SENAI's independence from public authorities and the governing role of employers, which lead to greater reliability of the budget and a better sense for the training needs of enterprises. However, being based on a revenue-generating scheme, the Brazilian models hardly provide new incentives for in-house enterprise training. For instance, it is mainly large companies that aspire to training agreements, companies which already have their own training institutions. Also, Dar *et al.* (2003, pp. 1, 4) mention that revenues have been diverted to other uses and that employers felt training providers failed to respond to their needs.

90. Another revenue-generating scheme exists in **Tanzania**. In 1995, the government created the Vocational Education and Training Authority, an autonomous training provider financed through a payroll levy of 2% (Source: Johanson, 2009, p. 22 [based on: African Development Bank/OECD, 2008]; Dar, *et al.*, 2003, p. 16). Hence the levy must be characterized as revenue-generating. Little is known, however, regarding instrument design, except that enterprises employing less than a certain number of employees were exempted from paying. The levy was first collected by the social security agency and then by the tax administration. This change led to a strong increase in funds being raised due to the levy.

91. The prospects for the instrument were not promising according to Dar *et al.* (2003), given that employers were reluctant to pay the levy. One major problem of the instrument seems to be that the Vocational Education and Training Authority (VETA) responsible for funds management promotes its own training centers and discriminates against private sector training providers. Also, government contributions to vocational training were crowded out. This, in combination with a lack of employer involvement has led to a hostile attitude on the side of employers.

4.2.2 *Incentive-based training funds*

4.2.2.1 Europe

92. **France** operates the levy scheme which is probably referred to most frequently in an international context (Sources: Smith/Billett, 2005, pp. 107-108 [based on: Goux/Maurin, 1997; Giraud, 2002]; Dar, *et al.*, 2003, p. 14; Gasskov, 1998, pp. 29-32 [based on: Bas, 1994; Willems, 1994]; Gasskov, 2001, p. 8 [based on: Bas, 1999]; Smith/Billett, 2004, p. 36 [based on: Hall, *et al.*, 2002]; CEDEFOP, 2008, pp. 81-93; EIM/SOER, 2005, pp. 103-106 [based on: Pukkinen, *et al.*, 2001; Adams/Nöbauer, 2000; Bentabet/Zygmunt, 1996]) Its roots go back to the 1920s, when the first apprenticeship tax was initiated. Regarding continuing training in the private enterprises, the legal framework is specific: Interprofessional agreements between social partners at the national level are

partly or fully incorporated into labor law. Since 1971, the Delors Act obliges firms to pay a fixed amount of their payroll into funds erected for the purpose of financing further training activities, if they do not spend this amount on such training themselves (levy-exempt scheme). In 2009, the mandatory contribution of firms with 20 or more employees amounted to 1.6% of gross annual wages, while firms with 10-19 employees had to pay 1.05% and micro enterprises had to pay 0.55%. In some sectors, social partners have agreed on higher mandatory contributions (ReferNet France, 2011). Fixed shares of the proceeds are used to finance individual training rights (Droit Individuel de Formation, DIF), individual training leave (Congé Individuel de Formation, CIF), and leave for the validation of non-formal and informal learning and skills audit. The remaining share, if not used for the enterprise's training plan, is fed into more than 100 different funds organized at the regional and industry level and managed on a bipartite basis by law (OPCA). The OPCA uses the proceeds for support for training costs requested by the firms, for fees, information costs and counseling (and of course for their own management). Fund collecting agencies cannot at the same time be training providers. Funds can be supplemented by donors and government subsidies.

93. Gasskov (2001, p. 8) notes that the number of employees benefitting from training strongly increased after inception of the levy, with enterprises spending significantly more than the required amount on training. According to Dar *et al.* (2003, p. 14), the levy generates proceeds of close to zero in the French system, because employers usually spend the amount on training themselves. Also, competition between training providers ensures that training contents comply with employers' needs. In EIM/SEOR (2005, p. 54), the impact of the schemes is considered as positive, "because it has contributed to the stimulation of awareness about the importance of continuing training among companies" and because it "contributed to the emergence of a competitive continuing training industry in the form of a wide array of public, private and non-profit suppliers of training." Smith/Billett (2005, p. 108), however, stress that the French system, although time-tested, "has often been viewed as unnecessarily complex and possibly ineffective". They argue that it does not produce better outcomes in terms of employee training participation or employer spending on training than do other less regulated systems of vocational training finance in Europe, for instance the German or British systems. However, empirical evidence (European Continuing Vocational Training Survey) does not support their statement concerning the magnitude of employer-provided training in France, as compared to other countries: The share of enterprises providing continuing training to their staff, the participation rate of employees and enterprises' total monetary expenditure for CVT were higher in France than in Germany in 1999 and 2005³: France is among the high performers regarding employer-provided CVT, 1999 as well as 2005, while Germany is not (CEDEFOP, 2010).

94. Further, the OECD states that unequal access to training among workers seems to persist and small and medium-sized enterprises are found to be disadvantaged (OECD, 2003, p. 133). The latter are said to pay the levy rather than providing training themselves (*e.g.* Gasskov, 1998, p. 30; EIM/SOER, 2005, p. 105). On the other hand, training poses greater difficulties for small enterprises, *e.g.* constraints of organization, which are not alleviated by the funding system. Based on comparative analysis using micro data of CVTS, a higher propensity of enterprises to provide CVT was found for France, as compared to Germany (Behringer/Descamps, 2009, pp. 105-111). In France, an enterprise's economic characteristics were significantly less influential with respect to its training provision – with the exception of size. Behringer/Descamps concluded that the differences between enterprises' CVT investments in Germany and France are an effect of the French funding system. However, it seems to increase size effects. They concluded that "financial incentives need to be complemented with training counseling, particularly in the case of small and medium-sized enterprises without professional staff for training issues at their disposal" (Behringer/Descamps, 2009, p. 120).

95. While France is the most well-known example of compulsory national training levies, the Dutch system is the most prominent example of sectoral training funds (Sources: CEDEFOP, 2008, pp. 131-143 [based on: De Mooij/Houtkoop, 2005; Waterreus, 2002; van Driel/EIM/Sociaal Beleid, 1999]; Kamphuis, *et al.*, 2010; Van Den Berg, 2006; Smith/Billett, 2005, pp. 106-107, 111 [based on: Waterreus, 1997; Hendriks/Westerhuis, 1997; Romijn, 1999; Brandsma, 2003]; Gasskov, 2001, p. 5 [based on: Veeken, 1999]). In 2004, some 104 so-called O&O funds operated under 134 collective agreements in the **Netherlands**. The respective levies differ from sector to sector, with the average in

2005 being 0.67% of gross wages. In addition, many funds receive ESF subsidies. Usually, the levies are compulsory, although in some cases they may be voluntary. An important focus of the O&O funds is initial vocational education. Nevertheless, they also finance collective training for employers who allocate the training amongst their employees, individual training for employees, and training plans submitted by employers. Also, on-the-job training and training for disadvantaged groups are a part of most funds' agendas. In addition, some funds have advisors visits and support companies in identifying and formulating their training needs. Some funds also provide compensation for internal training courses. Coverage is provided for direct training costs, and in a few cases for indirect costs, too. Co-financing on the part of employers, however, is usually required; the funds cover only a percentage (mostly 50% to 80%) or a maximum amount per year. Some funds focus on specific target groups, mostly older employees or persons without a minimum qualification. Most funds, however, do not have a target group policy. Having developed out of a tripartite regulation structure, the funds are managed by bipartite bodies, which normally collect, allocate, control and monitor the financial resources. Additionally, they typically decide on the allocation of resources, often in an annual plan, and approve training providers.

96. O&O funds are found to increase awareness of training importance and stimulate training activities. They have also been said to improve the quality of training and its compliance with sectoral needs. The sectoral differentiation gives employers a sense of control and ownership, leading to a high degree of acceptance among employers. However, though they are an example of successful cooperation among social partners, the importance of the funds must be put into perspective, as they account for less than 5% of total private CVT expenditure in 1996 (Smith/Billett, 2005, p. 108 [based on: Waterreus, 1997]). In 2002, merely 40% of firms were members of a training fund covering 38% of the employees, with marked differences between sectors (CEDEFOP, 2008, p. 137 [based on: Waterreus, 2002]). Moreover, Gasskov (2001, p. 5) has reported that small firms benefit less than big firms and training participation of women, low-skilled workers, temporary workers, and minority groups is relatively low. Finally, considerable unspent surpluses have been accrued by the funds (CEDEFOP, 2008, p. 137). Kamphuis *et al.* (2010, p. 2) do not even find evidence that training levels are higher in sectors with a fund than in sectors without one.

97. All in all, it has been argued that the position of O&O funds has become weaker due to new financing mechanisms (*e.g.* the personal learning budget/development account). Also, the proliferation of payback clauses in labor or training contracts tends to fuel this development (see CEDEFOP, 2008, p. 142). Therefore, the O&O funds see their future in the provision of general rather than sector-specific training, to facilitate employability and mobility of the workforce.

98. Sectoral training funds (STFs) also exist in **Belgium** (Source: CEDEFOP, 2008, pp. 30-43 [based on: Wouters/Denys, 1998; Van Grambergen/Denys, 1996; Durnez, 2003; Delaplace, 2003; EIRO, 1998]; Gasskov, 1998, pp. 32-34 [based on: Geers, 1996; Blanpain, *et al.*, 1994]; Gasskov, 2001, p. 6) where they are based on a bipartite intersectoral agreement dating from 1988. The funds are generally managed jointly by employers and employees (the government is not involved), are financed by contributions equivalent to 0.18% of the company payroll and are collected by the National Office of Security. Despite their common origins, the funds have developed sectorally in reaction to different training needs with the levy rate ranging from 0.1% to 0.6%. Some are active on the provincial, some on the federal level. Initially, the focus of funds was on activities for students in technical education and the unemployed. Since then, however, training for employees has become an emphasis, with special attention devoted to the low-skilled, older employees and those in danger of losing their job. Further, the development of training plans by employers is supported.

99. Output data for the funds' contribution to training activities is not available. Empirical evidence on employer-provided CVT in Belgium indicates low involvement of enterprises (share of enterprises investing in their staff below EU average, with a marked decrease between 1999 and 2005, and low total monetary expenditure⁴ of enterprises on CVT), but the participation rate of employees is above the EU average (CEDEFOP, 2010). The advantages of the funds mentioned pertain to rather "soft" criteria. For instance, it has been stated that STFs play an important role for society by constituting a link between governments and employers, facilitating the capacity to react to sector-

specific training needs, increasing efficiency and effectiveness of the vocational training system as a whole by ensuring a “high level of cooperation between [...] STFs themselves and [...] between the STFs and other training partners” (CEDEFOP, 2008, p. 42), and developing a training culture among both employer organizations and labor unions. On the other hand, the weaknesses reported include the tendency to monopolize the training market, as STFs are also training providers and offer training on better terms than other private providers, and the underrepresentation of SMEs in training activities. Also, training contributions are seen as an additional financial burden by some employers.

100. Sectoral training funds in **Italy** are called joint interprofessional funds for continuing training (Source: CEDEFOP, 2008, pp. 93-112). They can cover specific sectors, various sectors or specific occupations. The funds are founded, controlled and managed by national social partner representations with management bodies comprising equal numbers of representatives from employers’ and workers’ organizations but chaired by the employer-side. Nevertheless, the funds are instituted by law and must be authorized by the Ministry of Labour and Social Policies. In 2008, there were 14 such training funds. Their proceeds are generated through compulsory contributions of 0.3% assessed on payroll and collected by the national institute for social insurance (INPS). Yet, enterprises may voluntarily choose to participate in training funds. If they do, their whole contribution is fed into the funds. If they do not join in, their contributions are used by Italian government, mainly to finance other interventions in continuing training. Firms may join only one training fund per year. Levy proceeds are used to finance training plans pertaining to individual employees, enterprises, territories, or sectors. Training plans are supported in line with the priorities of each fund. Those priorities are redefined every two years, followed by extensively advertised calls for training plan proposals. Proposals must have been agreed between social partner representatives at firm level or at superior levels. After approval, firms must report on their training activities and there is close monitoring by the funds agencies to ensure that training complies with its guidelines. In cases of deviation, the training fund may prescribe corrective actions or even withdraw the funds.

101. Across all sectors, 42.4% of enterprises opt for joining in training funds with a fair amount of variation between northern and southern regions, the latter joining in much less frequently. Total proceeds amounted to EUR 750 million in 2006. Only 6.1% of the associated enterprises actually received support for training plans. On average, 20.6% of the supported firms had less than ten employees, 34.7% had 10 to 49 employees, and 27.6% had 50 to 249 employees. Of course, these figures must be contrasted with the distribution of firm size in the population. Employees benefitting from the scheme are mostly middle-aged; men benefit slightly more frequently than women. No formal evaluation has been carried out so far. However, experts have pointed to an overall “positive influence on the CVT system” (CEDEFOP, 2008, p. 111). Suggestions for improvement pertain to the reduction of bureaucracy and red tape, the introduction of a focus on southern regions and small enterprises, and the extension of consultancy services for enterprises to help them assess their training needs. Moreover, some experts seem to doubt that all training funds will survive as some of them are rather small in terms of available resources; those experts expect increased competition along with a concentration process among training funds.

102. **Spain** employs a rather peculiar levy scheme (Source: CEDEFOP, 2008, pp. 52-81). It operates under the tripartite foundation for training in employment, which has been amended several times during the past twenty years and which is based on tripartite agreements and was established by a Royal Decree. The levy scheme is now characterized by the following design elements: employers pay a compulsory contribution to the general treasury of the social security (vocational training levy). The rate is determined annually by law. In 2005, it was 0.42% of total wages. The proceeds are supplemented with ESF subsidies, amounting to roughly one quarter of total national resources, and regional government contributions. They are used to support continuing training actions in enterprises and individual training leave, covering direct and associated costs, but not indirect costs. The mechanism is peculiar: eligible training costs translate into credits that reduce firms’ social security contributions in the current year. Credits cannot, however, exceed a certain amount or a percentage of previous years’ levy payments. The credits available are higher for smaller firms. Thus, the scheme is effectively equivalent to a levy-exemption mechanism with the levy being graduated by firm size. Applications for credits can be filed online. The bulk of resources (almost EUR 600 out of

EUR 780 million in 2005), however, are used to support individuals. These resources are provided to business and trade union associations at national or sectoral levels, which plan and coordinate training actions according to sectoral needs and often with a special focus on disadvantaged groups. The main governing body, the General Council, is tripartite with the lead taken by the public sector.

103. CEDEFOP (2008, pp. 78-81) suggests that “if the Tripartite Foundation did not exist most continuing training activities would never take place, particularly for disadvantaged groups (SME workers, self-employed, women, people with low skills, etc.)”. Moreover, the Tripartite Foundation is thought to have “a positive effect [...] on the Spanish social dialogue”. The effectiveness of the scheme has not been evaluated. Distribution of benefits across employees is uneven, as is seen with most other instruments, too. Male, middle-aged, and qualified employees are over-represented among training participants. Only a few agricultural and construction enterprises are among the beneficiaries. However, the output data presented in CEDEFOP (2008) are not compared with the distribution of the respective characteristics in the population of employees and employers. In general, experts see a need for fine-tuning rather than radical changes in the system. One strength of the scheme is seen in the division between support provided directly to the disposal of enterprises and support provided to business and trade union associations, giving them the opportunity to respond to sectoral needs. One criticism is related to the bureaucratic burden involved with controlling the “ex ante and ex post subsidizing process”. From the social partners’ point of view, the strong position of public sector in the Tripartite Foundation causes this problem. Also, the described crediting mechanism appears to benefit large enterprises. The participation rate of enterprises increases with firm size, with small enterprises largely not benefitting from the instrument. As regards the training coordinated by social partner representations, experts have raised the question of whether this training is rather too general and not well adapted to sectoral needs.

104. The **United Kingdom** operated a levy-grant scheme from 1964 through the 1980s that was based on the Industrial Training Act (Sources: CEDEFOP, 2008, pp. 143-154; Dar, *et al.*, 2003, pp. 8, 14-15 [based on: Dougherty/Tan, 1991]; Abdel-Wahab, *et al.*, 2010). It was established in reaction to shortages in the supply of skilled labor. The act gave government the power to set up industrial training boards (ITB) to oversee training, set standards and give advice. 27 of these boards imposed compulsory levies between 1% and 2.5% on firms in the respective industry sector. Grants required compliance with approved training standards. The system was abolished due to a lack of employer support and deteriorating effectiveness. In particular, employers perceived the government as interfering unduly, the levy as an additional cost, and funds disbursement as following nontransparent principles.

105. As a reaction to skill shortages in the economy, the British government founded the Sector Skills Development Agency (SSDA) in 2001, funding, supporting and monitoring 24 Sector Skills Councils (SSCs). The latter are independent employer-led sectoral organizations whose boards include union representatives and which are licensed by the Secretary of State for Education and Skills. They oversee the provision of VET in a specific sector. Only two SSCs operate levy schemes, ConstructionSkills and Skillset. The first caters to the construction sector, the latter to the audiovisual industries. The Engineering Construction Industry Training Board (ECITB), which is not an SSC because it covers too few employees, also operates a levy. The boards comprise representatives of employers and employees, as well as the education sector (ConstructionSkills and ECITB), and the government (ConstructionSkills). The construction industry and the ECITB levy are compulsory, the Skillset levy is voluntary. ConstructionSkills charges all enterprises with a wage bill above GBP 73 000 a levy of 0.5% of employees wage bill and 1.5% of the value of payments to labor-only subcontractors. Proceeds are redistributed as grants. The ECITB in 2006/7 charged 1.5% of wages and labor-only payments for on-site employees (only if these total at least GBP 275 000), and 0.18% of wages and labor-only payments (if these total at least GBP 1 000 000) for off-site employees. There is an abatements process which returns some of the payments, depending on the firms’ training activities, with the level of abatement being graded at five different levels (0%, 25%, 50%, 75%, and 100%). Thus, the scheme exhibits levy-exemption characteristics. The voluntary levy collected by Skillset is 0.5% of the production cost of each film made in the UK (at the maximum GBP 39 500). Proceeds are disbursed on a grant basis. The rates of the two mandatory levies have to be approved by parliament

annually based on proof that at least half of the companies in the respective sector support it. The schemes are compulsory only for members of employer federations.

106. Altogether, the three STFs generated funds of about 170 million GBP. It has been argued that they contribute to higher training levels in the respective industries. ConstructionSkills is thought to play a crucial role, especially for small firms. Also, rather broad support for the scheme exists among employers. Tripartite governance has been mentioned as an important feature promoting satisfactory performance. Abdel-Wahab *et al.* (2010, p. 279) state, however, that larger companies may be benefiting from the scheme at the expense of smaller companies. They argue that it is not only a question of how many training grants smaller companies receive, but also what they spend it on and what potential impact this may have on their business performance and profitability. The impact of training in terms of its transfer to the workplace and its contribution to business performance is uncertain in their view. They also found that labor shortages and lagging training participation persist in the industry.

107. In **Hungary**, employers pay 1.5% of their payroll as a ‘vocational training contribution’ (Sources: Johanson, 2009, pp. 72-74 [based on: Masson, 2005; Godfrey, 2000]; Dar, *et al.*, 2003, p. 15; CEDEFOP, 2008, pp. 28-29). Originally this served a purely revenue-generating purpose and was used to finance initial vocational training in public institutions. Now, the levy serves manifold purposes. To begin with, employers are allowed some freedom in deciding on the allocation of the contribution. Up to one third can be spent on continuing training for the companies’ own staff. To this extent enterprises are exempted from the levy, if the programs are included in the national vocational qualification register. Further, as much as 75% can be devoted directly to vocational schools or higher education institutions. The remaining amount is contributed to the Vocational Training Fund. This, in turn, is partly distributed across municipalities according to the number of students per capita and can be deployed for measures approved by the Minister of Education on the advice of the National Vocational and Training Council (NVTC). Another share is placed at the immediate disposal of the Minister of Education (advised by the NVTC). It can be made available in the form of grants to enterprises that offer practical training for initial VET students. Other potential dispositions include the endowment of vocational schools with equipment and contributions to the Leonardo da Vinci program. In addition, support is given to the work of the Chamber of Commerce and the National Institute for Vocational Education (NIVE). In 2000, 13.3% of the proceeds were devoted to CVT for employees, while 86.7% was used to the benefit of initial training activities.

108. Employer influence on resource allocation in the Hungarian scheme has led to a drastic reduction in the share dedicated to corporate training during the 1990s. As a reason for this, Johanson (2009) puts forth the requirement of compliance with the National Vocational Qualification Register to receive funding for training courses. This argument implicates that enterprises were not able to make sensible use of the exemption opportunity, because they could not cover their actual training needs this way. Another aspect is the fact that Hungarian firms played an active role in initial education and training even before the Fund was introduced. This does not explain, however the drastic shift in resource allocation. Overall, in spite of their influence on resource allocation, employers are skeptical about the role of government and found that it exercises too close control over the Fund, limiting its effectiveness (Dar, *et al.*, 2003, p. 8). In a survey they complained that government used the funds to finance public training institutions and a research and development organization.

109. Quite a few other examples of sectoral training funds in Europe, have been quoted in the literature, such as the **Greek** LAEK fund (CEDEFOP, 2008, p. 28) the **Icelandic** vocational training funds for occupations (p. 29), or the **Norwegian** sectoral and cross-sectoral funds. Also, **Poland** and **Slovenia** have initiated levy-based training funds. However, no statements assessing the performance, *i.e.* success or failure, or at least commenting on strengths and weaknesses of these instruments were available in the literature reviewed, so this report does not discuss their design.

4.2.2.2 Asia

110. A successful training fund can be found in **Singapore** (Sources: Johanson, 2009, p. 29 [based on: Atchoarena, 1996; Singapore Workforce Development Authority, 2008]; Dar, *et al.*, 2003, p. 14 [based on: Kuruville/Chua, 2000; Tzannatos/Johnes, 1997]; Smith/Billett, 2004, pp. 29-30, 36 [based on: Ashton/Green, 1996; Ashton/Sung, 1997; Ashton, *et al.*, 2002; Low, 1998; Osman-Gani/Tan, 2002]). The Skills Development Funds (SDF) is intended to support economic restructuring. Established in 1979, it is based on a levy-grant scheme.⁵ Every enterprise is obliged to chip in 1% of the monthly pay for each worker who earns S\$ 2 000 or less a month – at least S2\$ per worker. In effect, firms with a high percentage of low-wage workers contribute more to the funds. The funds managing agency, the Singapore Workforce Development Agency (SWDA), is subject to strong influence by employers, who fill seven of fifteen positions. Four representatives are associated with the government, three with workers. The focus of funding activities has been on raising general skill levels among workers who did not complete education rather than the provision of specific skills. However, other fields of activities have become increasingly important, such as the promotion of skills certification, training leave schemes for older workers, on-the job training consultancy, as well as the provision of training vouchers and assistance IT training for SMEs.

111. The Singapore training levy receives a great deal of credit in the literature. The scheme has been complimented for its administration, which builds on a strong network of industry-based training facilities and the well-targeted awarding of grants, which are linked to firms' restructuring programs. Gasskov (2001, p. 10) reports various indicators showing a positive trend in the development of enterprise training and its effect on labor market performance of individuals. Indeed, the latter indicated that training was important for the achievement of higher wages. Nevertheless, in spite of a noticeable increase in firm-based training incidence and the number of trained individuals since 1991 (see Dar, *et al.*, 2003, pp. 4-5), small firms remain disadvantaged: only 50% of the enterprises with less than 50 employees apply for grants as opposed to 100% of the firms with 200 or more employees. Less than 14% of enterprises with less than ten employees avail of the SDF. Also, training for older workers lags behind expectations. In addition, it has been noted by Smith/Billett (2004, p. 30) that the Singaporean scheme operates in a highly regulated environment that involves tight government planning of economic and educational development, where enterprises and individuals show a great level of commitment to the state's vision.

112. Singapore's neighbor **Malaysia** implemented a cost-reimbursement scheme (Sources: Johanson, 2009, p. 28 [based on: Harold, *et al.*, 1996; de Ferranti, *et al.*, 2003]; Dar, *et al.*, 2003, pp. 10, 15-16 [based on: Tan/Gill, 2000]; Smith/Billett, 2004, pp. 30-31 [based on: Wong, 1997]). It was created in 1992 with the governing Human Resource Development (HRD) Council comprising employer and government representatives. The levy amounts to 1% percent of the payroll for enterprises with at least 50 employees. Smaller firms may participate voluntarily. In that case, they contribute an equivalent of 0.5% of their payroll. The proceeds are collected by the HRD Council, which is subordinate to the Ministry of Manpower. Participating firms have the right to apply for reimbursement of training costs to the extent they have contributed to the funds. Approved courses may be bought from registered external providers. In such cases, the external training institutions act as collection agency for the funds, reducing bureaucracy. Alternatively, companies may develop annual training plans or provide ad hoc training as needed to its employees. The respective courses, however, need to be approved by the funds council in advance.

113. Statements about the degree of success of the instrument are mixed. Although it operates in generally the same way that the Singaporean scheme does, Smith/Billett (2004, pp. 30-31) nevertheless find the Human Resource Development Fund (HRDF) to be less successful, because employers apparently treat the levy as a tax. Also, evaluation results show that training could be increased only among medium and large enterprises. Almost half of the small companies registered fail to claim funds. Admittedly, based as they are on a survey conducted in 1994, these results reported by Dar *et al.* (2003, p. 10) may not reflect the current performance of the scheme. Further, Smith/Billett (2004, pp. 30-31) mention that migrant workers are not covered by the scheme, leading to low skill levels in the plantation and construction industries. Summarizing, they conclude that

Malaysia, seeking skill development primarily to offset rising labor costs and be able to compete with China for foreign direct investments, has a need for skills in excess of what the HRDF delivers.

114. On the other hand, Johanson (2009) presents the instrument in a rather positive light. For instance, he mentions that over 70% of the financial resources are passed back to participating firms. By 2006, 5.3 million workers had been trained. Johanson (2009) points to the strong employer involvement – like in the case of Brazil – as a reason for the success. Additionally, the scheme gets by with relatively little bureaucratic waste, due to the integration of training providers in the levy collection process. Also, marketing – an aspect that has not received attention so far – seems to be a crucial factor determining the success of the instrument. This includes the dissemination of information on the benefits of skill development as well as the organization of regional courses on training needs identification. Finally, the funds agenda includes special programs addressing small enterprises.

115. Korea (Sources: Bosch, 2010, p. 33; Dar, *et al.*, 2003, p. 16 [based on: Gill/Ihm, 2000]; Smith/Billett, 2004, pp. 31-32 [based on: Korea Research Institute for Vocational Education and Training (KRIVET)/National Centre for Vocational Education Research (NCVER), 2000]; OECD, 2004, pp. 119-120; Atchoarena, 1996) operated a compulsory levy-exemption scheme as of 1974, the Vocational Training Promotion Fund, to help restructure the economy. Compulsory for firms with a least 500 employees in the beginning, the levy was extended to firms with at least 150 employees in the 1990s. To qualify for exemption, firms had to provide recognized training according to government regulation.

116. The effect of the program was transitory: a steep rise in the number of training participants after initiation of the program was followed by an equivalent decline during the 1980s, even though the levy was raised drastically during the same period. The scheme was abandoned after employers demanded its abolishment. The failure has been attributed in part to complicated regulations concerning training requirements and approval.

117. Since the enactment of the Act for Promoting Workers' Vocational Training in 1997, Korea has operated a program to support "the continuous development of the vocational abilities of employees at the work site" (OECD, 2004, p. 119), the Vocational Ability Development Program (VDAP). The program is administered and steered solely by government. Korean employers have to pay a levy attached to the Employment Insurance contributions, ranging from 0.1% to 0.7% of payroll. Enterprises with less than 150 employees pay 0.1%, enterprises with more than 1 000 employees 0.7%. The proceeds are used to finance in-plant training, paid educational leave, training courses outside the firm, and subsidies to individuals (employees and individuals). Also, firms (especially SMEs) may receive support for training facilities and equipment.

118. Assessments of the program's success vary. Smith/Billett (2004, p. 32) do not view the program as very successful. Instead, they argue that it suffers from windfall gains to enterprises that already procure substantial resources for training purposes. On the other hand, the OECD (2004, pp. 119-120) concludes that VDAP has contributed remarkably to vocational skill development, with more than 80 000 companies having received support in 2001. Bosch (2010, p. 31) explains that training intensity on the part of firms has indeed increased, but despite the financial incentives, the participation of low-skilled workers as well as qualified production workers in training is lower than that of office and sales clerks. Further, employer participation strongly depends on enterprise size. Bosch (2010) presumes that the government-led approach may indeed have been necessary, because social partners' organization was too weak to allow the attainment of collective agreements, but points out that government intervention was capable of supporting vocational training only for large enterprises.

4.2.2.3 Africa

119. **South Africa** introduced a compulsory levy scheme in 1999 (Sources: Johanson, 2009, pp. 16, 35, 75-78 [based on: Walther/Gauron, 2006; Walther, 2005]; James, 2009; OECD/African

Development Bank, 2008; Dar, *et al.*, 2003, p. 16). It was developed based on arrangements originally agreed upon by social partners, which established industrial training boards (ITB) in more than 20 industry sectors, relied on voluntary contributions and covered less than 20 percent of the workforce. After government intervention, virtually the whole economy except the public sector was covered, while the sectoral differentiation could principally be retained. In the new system, contributions of 1% of the payroll are required from every enterprise with a payroll in excess of R 500 000. At a minimum, 50% of the funds are transferred back to enterprises in the form of grants via 24 Sector Education and Training Authorities (SETAs). The grants are paid out in phases upon the development of so-called “Workplace Skills Plans”, the appointment of a Skills Development Facilitator who is responsible for implementation of the respective plans, and submission of Workplace Skills Implementation Report, which highlights the implementation progress. Hence, in principal, the fund employs the levy-grant scheme. Due to the possibility to withdraw below the above-mentioned threshold, however, the scheme has some characteristics of a levy-exemption, too. Some 20% of the funds are spent according to the special sectoral training priorities defined by each SETA Board (bi-partite: employers and workers). Another 20% go to the National Skills Fund (NSF), *inter alia* for the purpose of funding training for the unemployed as well as disadvantaged groups and of responding to skill shortages in specific fields.

120. The objectives of the NSF are defined for a 5-year period. Furthermore, the National Skills Development Strategy sets benchmarks for the percentage of workers and businesses to be reached with the funds. For instance, it requires a certain percentage of training programs to benefit blacks, women, and disabled persons. The 2010 targets were reached to a large extent already during the 2006 to 2008 period. Nevertheless, only half of the proceeds are actually deployed because of a lack of contractor capacity and NSF staff. Hence, efficiency of the instrument is moot. Also, the system is perceived to be cumbersome, as significant paperwork is required to claim back the levy paid in grants (James 2008). Therefore, large companies benefit more than smaller ones. Furthermore, workers in the informal sector are not covered by the levy scheme. Johanson (2009, p. 35), though, finds its achievements regarding disadvantaged groups impressive.

121. **Cote d’Ivoire** applies a hybrid levy scheme (Sources: Johanson, 2009, pp. 31, 39, 80-87 [based on: African Development Bank/OECD, 2008; Atchoarena, 1996; Ziderman, 2003; Ette, 1999; Verner/Verner, 2005]; Dar, *et al.*, 2003, p. 15). Introduced in 1959, the vocational training development fund, FDFP, experienced several problems, including high administrative costs, diversion of funds for different purposes by government, irrelevance of training to employers, and limited access to funding for small firms and employees in the informal sector. Since its reformation in 1991, the FDFP exhibits the following design: it is based on two compulsory payroll levies, one for apprentice training (0.4%) and one for continuing vocational training (1.2%). Exemption is possible, but subject to approval of a company training plan. It amounts to 0.6%, *i.e.* half the dues for continuing training. Companies may be exempted even beyond that scope if they manage to get approval of a three-year training plan. Collection of the remaining contributions is carried out by the income tax department and credited to an account directly at the disposal of the FDFP. The FDFP is partially equity-oriented, *i.e.* the collected funds are – among other purposes – used to finance collective training for micro-enterprises, female entrepreneurs, enterprises in the informal sector, and non-subscribers. Roughly 20% of resources are devoted to these beneficiaries. This is exceptional and can be regarded as a result of a World Bank support project. During the 1990s, the FDFP received significant financial aid from the World Bank to create awareness for the needs of these target groups and induce a reorientation in the application of funds. The project also helped improve competition among training providers and reduce training costs through standardization.

122. Surveys among beneficiaries revealed their satisfaction with the training, but also shed light on the difficulty of actually improving labor market success of individuals in the absence of critical resources and inputs such as water or credit. Overall, however, impact evaluations of the World Bank project find positive effects on labor market success (*i.e.* income increase) of beneficiaries. Also, the geographical distribution of training improved due to the project. With the help of the project, 71 000 individuals had been trained by the end of 2000. However, Johanson (2009, p. 39) notes that major marketing efforts have been necessary to actually reach the poorest population, and that usually

assistance was needed to transform the training requests from informal sector enterprises into programs with clear objectives and specifications. Total output of the FDFP from 1993 through 2006 adds up to 24 600 company training programs for 483 000 employees deploying EUR 125 million. Collective training was provided for 188 000 individuals at the cost of EUR 51 million. As critical success factors of the FDFP, Johanson (2009, p. 39) mentions the financial autonomy of the FDFP, which receives the funds directly from the tax authority instead of the government. Further, equal division of its governing agency, the Board of Directors, provides for management autonomy by preventing over-control of government.

123. Three other West African countries have developed training funds with financial and technical support by the World Bank and/or other international foreign aid institutions: **Mali**, **Benin**, and **Burkina Faso** (Source: Johanson, 2009, pp. 40-41, 87-93 [based on: Walther/Gauron, 2006]). All three countries imposed a payroll levy on employers to support training for the formal and informal sector. Hence, as in the Ivory Coast model, part of the proceeds was used for cross-subsidization creating solidarity between the sectors. The main goal of the funds, however, was to turn away from the supply-oriented system, which focused strongly on academic technical education, and turn towards a demand-driven approach in line with employers' needs. At the same time, the development of a vocational training market should be triggered. To reach that, beneficiaries had to file (under assistance) a request for training financing, which was used by the funds management to invite three tenders from providers. Also, beneficiaries were required to bear a share of 10% to 25% of training cost.⁶

124. Apparently, the stated goals could not be reached in any of the three countries. Even though considerable amounts of training were financed for the informal sector at relatively low unit cost, the bulk of financial resources accrued to the formal sector, supporting dual-type apprenticeships with part of the training taking place in training centers and part being procured on-the-job. Furthermore, the development of training markets was compromised. In general, the lack of a solvent demand has been identified as an important factor hindering its growth. At least in Benin and Mali, this was also due to the lengthy and complicated application procedures recommended by the World Bank for training providers. Providers often lacked expertise in preparing adequate proposals. Long response times to beneficiaries' training requests were the consequence. Even more time was needed, when funding for the beneficiaries' contribution had to be acquired. Next, the levy was collected by governments and subsequently transferred to the training funds, potentially leading to delays in availability of funds, *e.g.* in Mali. Moreover, only small shares of the proceeds were eventually passed on to the training funds by the Ministers of Finance. In fact, not even the resources on hand could be exhausted, which was not least due to the stunted training market. And finally, even though funds management was divided in principle, equal representation of government, employers and unions was assured only in the case of Benin, so that in general the public sector was quite powerful. No hint, however, could be found that this was a decisive factor impeding success or causing inefficiency.

125. **Nigeria** operates a cost reimbursement scheme (Source: Dar, *et al.*, 2003, p. 15) that was established in 1971. The payroll levy amounts to 1.25%. Reimbursement covers direct training expenses and the cost of training personnel, if the courses are approved. It is limited to 60% of the levy paid. However, only 50% of registered enterprises actually contribute to the Industrial Training Fund (ITF), and merely 15% file claim for reimbursement, because most companies dread bureaucracy. Additionally, it is argued that the ITF is overstaffed. Apart from that, SMEs have not been targeted effectively.

126. Another cost reimbursement scheme is applied in **Kenya** (Source: Dar, *et al.*, 2003, p. 15). Established in 1971, the levy varies by industry and is compulsory for companies with at least four employees. Reimbursement is subject to recognition of the training programs. However, not many employers make use of the levy proceeds provided through the Industrial Training Levy Fund (ITLF). In fact, training is said to have declined among some groups of employees. Also, private training providers have apparently been crowded out of the market.

127. **Mauritius** introduced a levy scheme in 1990 (Source: Johanson, 2009, p. 22 [based on: African Development Bank/OECD, 2008]). Employers must contribute 1% of their payroll to the National Training Fund. The latter is managed by the Human Resource Development Council (HRDC). Enterprises can recoup up to 75% of their training cost, depending on their tax rate. Hence, even though the scheme has been termed “levy grant” by Johanson (2009, p. 22), it seems to fit better in the class of cost reimbursement models. Courses must be conducted in-house or at registered training institutions. Registration is the responsibility of the Mauritius Qualification Authority (MQA). Originally, these functions were bundled under the authority of the Industrial Vocational Training Board, which is also a provider of training. Obviously, this led to conflicts of interest and discrimination against other private sector training providers.

4.2.2.4 Australia

128. **Australia** operated a compulsory levy-exemption scheme from 1990 to 1996 (Source: Smith/Billett, 2005, pp. 98, 107-108 [based on: Baker, 1994; Teicher, 1995]; Smith/Billett, 2004, pp. 32-33 [based on: Velten, 1990; Pollock, 1991; Noone, 1991]).⁷ Enterprises were required to provide ‘structured’ training worth at least 1.5% of their payroll, if it exceeded AUD 200 000, or to pay the shortfall to the Australian Taxation Office. The proceeds covered structured and employment-related training, regardless of whether it was provided on-the-job or off-the-job.

129. The Training Guarantee Scheme, however, has apparently not been capable of raising the training incidence for the majority of employees. A major reason for that is seen in the scheme’s linkage with the tax system. That led employers to see the levy as an additional cost, “punishing” them for non-compliance rather than an investment in skill development. Smith/Billett (2004, p. 32) see another reason in the relatively high costs for enterprises of keeping records to ensure that all training is reported. They argue that as a consequence many small enterprises have opted for paying the levy instead of providing training. Allegedly, some enterprises even reduced their training efforts to the minimum level required, despite having made higher investments before. There is, however, no evidence to support this view. Noone (1991) has criticized the scheme for focusing too much on training quantity instead of quality (quoted in Smith/Billett, 2004, p. 32).

4.2.2.5 Regional training funds

130. A “train-or-pay” scheme of the French type is in operation in the province of **Québec** in Canada (Sources: Fortin/Parent, 2008; OECD, 2003, p. 131 [based on: Emploi-Quebec, 2000]; Gasskov, 2001, p. 8; [bases on: Wilson, 1999]; Stone, 2010). According to a law passed in 1995, every enterprise is required to invest the equivalent of 1% of company payroll in training, if that payroll exceeds CAD 1 million. Otherwise corresponding payments must be made to Revenue Québec to support the national workers’ training fund (FNFMQ). The latter is governed by a committee of labor market partners (CPMT), who agree on a plan for allocation of the levy proceeds approved by the Minister of Labor and Employment. The range of eligible training activities is rather wide, and includes internal and external courses.

131. The Five-Year Report 1995-2000 revealed that small companies seem to be disadvantaged by the system and that employers in general showed ignorance concerning the fund (OECD, 2003, p. 131). The main issue seemed to be the bureaucratic burden associated with proving expenses on eligible forms of training. Gasskov (2001, p. 8), on the other hand, conjectures that a training culture has developed due to government intervention, because “it was noted that some employers who became subject to the legislation in 1997 have begun to deliver training rather than to pay into the Fund”.

4.3 Assessment

132. Dar *et al.* (2003, pp. 6-7) conclude that levy schemes can indeed increase the amount of training undertaken by employers. Malaysia, Singapore and France serve as positive examples. Also, Gasskov (1998, p. 34) mentions that “to a certain extent such schemes [...] allow management of the

training [...] through the establishment of conditions that must be met [...] to be eligible for financing [...]”. In addition, levy schemes are said to strengthen cooperation and dialogue between social partners (CEDEFOP, 2008, p. 182).

133. Nevertheless, it is difficult to nail down a handful of success factors for the design of training funds. Johanson (2009, p. 5) cites Adrian Ziderman (2003) who states that “the characteristics of individual training agencies (funds) vary [...] greatly” and that “the concept of ‘best practice’ in relation to training funds is nebulous, given this heterogeneity of objectives and practice”. In other words: there is no best way to do it. Which features are most sensible in the design of a levy scheme, depends much on the specific national setting, including such aspects as training participation patterns of employers and employees, industry structure, administrative structure, the existence of institutions responsible for vocational training issues, and the traditional role of government, employers and employees in labor market policy as well as the traditional relationship between these parties.⁸

134. Hence, the question of ‘What to do?’ must be replaced by the question of ‘What to keep in mind?’ Practice has revealed a couple of undesirable trends and symptoms of failure following the implementation of levy schemes summarized in the evaluative evidence presented above. These substantiate risks of training funds in combination with levy schemes. These risks can either be general or specific with regard to certain country conditions. The following section formulates these risks. In association with that, we offer some reflections on the design of a successful instrument.

135. Further on, we provide summary judgments of specific design elements based on information of cases in which they have contributed to or hindered the success of an instrument, and on the view of expert authors who have brought forward arguments in favor of or reservations against specific design elements.

4.3.1 *Risks and undesired outcomes in practice*

136. The most obvious caveat of training funds in combination with levy schemes is the fact that they increase labor costs and take autonomy away from employers. Accordingly, **employers** may look at their contribution simply as a tax (*e.g.* U.K.) and **lack commitment**. Along with this comes the risk of employers passing on the additional cost to employees (*e.g.* Johanson, 2009, p. 14; Dar, *et al.*, 2003, p. 3). For these reasons, employer buy-in is seen by Johanson (2009, v) and Dar *et al.* (2003, p. 8) as crucial for the success of levy schemes. Of course, this involves consultation with employers regarding instrument design and implementation and consideration of their needs in an early phase. But it can also express itself in a strong role for employers in funds governance, including an influence on training priorities and funds allocation. Examples are Brazil and Singapore. Tripartite governance may work, too (Cote d’Ivoire), as it can foster cooperation between social partners. In any case, governments should not “over-control” the arrangements. Johanson reports examples from Togo and the Gambia, where such over-control has led to misallocation of levy proceeds. As a part of employer buy-in, bureaucratic burden on employers (*i.e.* paperwork) should be as low as possible and application procedures should be transparent and unambiguous. If employer buy-in fails, firms might not only abstain from applying for grants or reimbursement, but even resist paying the levy. In specific, it seems important to adapt procedures to the capabilities of small and medium-sized enterprises.

137. In a couple of cases, levy schemes have generated **surpluses**, because funds could not be paid out due to a lack of applications. The risk for unspent resources seems to be high especially in bureaucratic schemes like levy-grant or cost-reimbursement (*e.g.* Netherlands).

138. The introduction of levy schemes has been challenging in some low income countries. Hence, administrative capacity and a well-developed industrial base have been recommended as critical prerequisites for the implementation of a payroll levy (Johanson, 2009, p. 49). This argument can probably be extended to per capita levies as well. In general, the **administrative cost** of raising and disbursing the funds must be kept within a limit. The levy-exemption scheme has advantages in this respect. For levy collection, exploiting the tax authorities may be a cost-efficient way. On the

other hand, this kind of supervision may lack necessary training competence (see Gasskov, 1998, p. 34). Also, if funds are gathered by government, there is a risk that the proceeds might be diverted to different purposes. Hence, independence from public budgets seems important. It can be achieved by crediting levy proceeds to an autonomous account directly at the disposal of the funds managing agency. Further, administrative burden can be aggravated by the need to control training quality and content, if a system of certification for training providers does not exist. This, however, is a risk equal to that of any financial policy instrument.

139. It goes without saying that instruments must be effective. That is, they must be capable of raising training participation of firms, while restricting the risk of **deadweight loss**. Cost-reimbursement schemes in particular face the threat of failing to result in additional training. Levy-exemption schemes, on the other hand, may entail a **“leveling” effect**. For instance, Dar *et al.* (2003, p. 7) report that firms tend to reduce their training effort to the minimum level required to qualify for a tax rebate (or exemption). Similarly, Gasskov (1998, p. 35) says that the French system, in spite of its long history, had not, at the time he wrote, led to the emergence of a training culture. EIM/SEOR (2005), however, conclude that a stimulation of enterprises’ awareness of training issues and necessities in France has occurred. Enterprises’ expenditure on continuing training of their staff, according to CEDEFOP 2008 (p. 86) is well above the legal minimum in France.

140. Improvement of equality in access to enterprise training is also a critical aspect of effectiveness of the instrument. However, in connection with levy schemes, it is clear that this goal is not reached. Virtually all training funds are incapable of encouraging small enterprises to train their workers or do so only to a rather limited extent. **Large firms benefit disproportionately** (OECD, 2010, p. 122; Johanson, 2009, p. 17; Dar, *et al.*, 2003, pp. 6-7; Gasskov, 1998; CEDEFOP, 2008). The possible reasons for this are well-known: small enterprises may lack the capacity to (a) determine training needs, (b) systematically plan training for employees, and (c) file applications for cost reimbursement or grants. Additionally, in small companies, employees are often indispensable at their workplace. Last but not least, small firms may simply be unaware of the benefits associated with skill development, which can in turn be ascribed to the lack of capacity to determine training needs. Thus, consultation services for small enterprises may be a crucial element of levy schemes.

141. However, the issue of equality does not pertain only to company size, but also to the skill level of workers. **Low-skilled workers** generally **benefit less** than high-skilled employees from levy schemes. At any rate, the question has been raised in the literature of whether equitable distribution of employer-provided training should be an objective of incentive schemes (see Gasskov, 1998, p. 35). After all, employers must respond to business needs. For instance, if technological or organizational changes do not occur, it may not make sense from an entrepreneurial point of view to offer training to blue-collar workers, at least in a short-term perspective. Employers tend to train those employees who are most likely to succeed and turn the gained skills into company profits. Similarly, Bosch (2010, p. 35) advances the view that training funds do not appear to be appropriate for promoting disadvantaged groups, suggesting that measures serving that purpose should be financed by government from general tax revenues.

142. Further, a couple of unintended side-effects may emerge when implementing a policy instrument. *E.g.* the summarized evidence contained hints at **crowding out of government resources**. Also, in some cases the design of training funds abets **monopolizing trends** and the discrimination against private training providers. While increasing competition among training providers is not the primary goal of most funds, nonetheless governing agencies should not also be training providers or be able to assign resources to their own training institutions. Transparent processes for approval or registration of eligible training providers can be recommended.

143. **Unintended cross-subsidization** between workers of different skills or in different sectors may arise in all types of levy schemes (Dar, *et al.*, 2003, pp. 3-4). Depending on the relative market power of employers and employees, workers in certain industry sectors may have to bear the burden of the levy and in effect finance the training for workers in other sectors. Analogously, one could apply this argument to the skill level of workers: enterprises might pass on the additional cost to all workers

equally, but benefits from funds disbursement are distributed unequally. Based on this argument, one could make a case against payroll levies and for per-capita levies graduated progressively with respect to the skill level of worker. On the other hand, in such a scheme, high part-time employment would result in high financial burden. Other measures like company profits, production value or sales have been suggested or used as scales to determine employer contributions, but from the authors' point of view, these relate insufficiently to actual training needs and compromise the goal of successful employer buy-in.

4.3.2 *Assessment of design elements*

144. **Universal** levies seem to work against the principle of employer buy-in; being incapable of addressing specific sectoral needs they do not convey a sense of ownership to employers. Certainly, this disadvantage is even more pronounced if the instrument has been initiated by the government, possibly through legislation. In contrast, Gasskov (1998, p. 33) has argued that “through **sector funds**, close employer-government cooperation has been achieved”. Employer commitment is probably the highest, when sectoral levy schemes emerge from collective bargaining without any government intervention.

145. If additionally, levy rates are graduated by sector, issues of cross-subsidization between industries may be reduced. Nevertheless, sectoral funds are inflexible in the sense that they hinder the shift resources between sectors, even though national skill priorities may make such a shift advisable. In addition, they might not be successful in developing general skills, transferable to other industries and promoting the employability of workers. It has also been argued that sectoral funds may duplicate efforts and thus loose efficiency compared with a universal regulation (see: Johanson, 2009, p. 16; CEDEFOP, 2008, p. 181).

146. **Revenue-generating funds** that finance vocational training institutions mainly serve the purpose of pre-employment training, but need not be restricted to this (as in the case of Brazil). According to Johanson (2009, p. 19), they help to increase total training output and improve the match between training and skill needs of the economy. However, Dar *et al.* (2003, p. 4) mention various risks. Lack of employer commitment is the most obvious one. The lower the quality of public training supply and the lower responsiveness of public training providers to enterprise needs, the greater the relevance of this problem. Hence, Johanson (2009, p. 19) finds it crucial that the employer-side governs the development of training priorities. Similarly, there is a risk that private sector training providers might be crowded out of the market. Also, government funding may be displaced. In fact, in some cases levy proceeds have been diverted to finance other government activities. The Colombian case is quoted as an example by Dar *et al.* (2003, p. 4) and Johanson (2009, p. 23). Furthermore, revenue-generating schemes “tend to create bureaucracies” and “accumulate surpluses” according to Dar *et al.* (2003, p. 4).

147. Incentive-based schemes usually pursue a different purpose. Here, the aim is to promote employer-provided training. If this is done via **cost reimbursement**, funds managing agencies have the opportunity of disbursing resources according to certain national or sectoral training priorities. Bureaucratic burden, however, is high, as firms need to complete quite a bit of paperwork to apply for cost compensation. As a consequence, the schemes may end up supporting training that would have been carried out anyway while finding it difficult to stimulate new or additional training. Additionally, administrative costs are high on the agency's sides, diminishing the funds available for disbursement. The approval process may lead to deferral of enterprise training (see: Johanson, 2009, p. 32 [based on: Ziderman, 2003; Asian Development Bank, 1997]). Furthermore, complicated application procedures may deter smaller enterprises from filing claims. Generally, Dar *et al.* (2003, p. 5) declare that these schemes often benefit firms with well-established training programs, generating a significant deadweight loss.

148. **Levy-grant** schemes offer the possibility of putting forth incentives for entrepreneurial skill development by redistributing resources from companies that do not train to companies that do. On the other hand, many companies that contribute to the funds may not be able to share in their

appropriation. As cost reimbursement, levy-grant schemes allow the allocation to priority types of training, be it national or sectoral priorities, therefore giving the governing agency some influence on the type of training provided. On the downside, relatively high administrative costs for case-by-case decisions about grant applications must be taken into account (see Johanson, 2009, p. 32). Because tax authorities usually lack the respective competence, separate bodies need to be established. Further, the implications of complicated application procedures and the risk of deadweight loss are the same as with cost reimbursement.

149. **Levy-exemption** schemes ensure autonomy for employers, allowing them to pursue their established training strategy. The bureaucratic burden on them is limited to proving the amount of their expenditure on training, whether that provided by themselves or purchased. This goes along with de-facto preferential treatment of more formalized forms of training, as compared with other than course-style training, simply because expenditure for formalized training is easier to substantiate. If firm contributions can be made to training providing institutions, competition in the training market may be stimulated. However, sectoral or national training strategies cannot be pursued (Gasskov, 1998, p. 29; Johanson, 2009, p. 32). Further, it may be difficult to foresee the scope of the available budget. Hence, spending resources effectively could be a challenge in this scheme. And, companies might opt for paying the levy rather than providing training, because this is just easier to do. In fact, it has been argued that training firms that previously spent more than the required amount, might decrease their training spending to reflect the minimum (Johanson, 2009, p. 53). However, the French case, with enterprises' expenditure on CVT well above the legal minimum and increasing – which runs counter to the trend in western and northern Europe (CEDEFOP, 2010) – does not support his argument. Moreover, the OECD argues that train-or-pay levies are inefficient, because they “overpay the increase in training investment they induce on the part of firms that would have spent less than the legal minimum in the absence of the scheme, since marginal benefits of additional training are not zero for these”(OECD, 2010, pp. 128-129).

150. **Universal** (and usually compulsory) levies have been proven ineffective in augmenting equality of chances for workers to participate in employer-financed training. Better qualified employees or those at higher occupational levels, and employees in large firms seem to derive greater benefit from levy schemes. Furthermore, the administrative burden is frequently mentioned as a drawback of such schemes. And finally, they may suffer from low commitment and identification on the employer-side (OECD, 2010, p. 122; Johanson, 2009, iii-iv; Smith/Billett, 2005, pp. 110-111).

151. **Sectoral** levies may be more attractive to firms because they contribute to sector-wide strategies and impart a greater sense of ownership. Nevertheless, they do not necessarily perform better in terms of improving access to training for the low-skilled or increasing training efforts in general (OECD, 2010, p. 122; Johanson, 2009, ii).

152. Training funds using the **tax system** to collect the levy may work with greater cost-efficiency than funds that collect the money themselves. On the other hand, it can promote employers' perceptions of having an additional cost incurred rather than creating a sense of the benefits associated with training investments (Smith/Billett, 2005, p. 108).

153. It is difficult to derive general success factors from the experiences made with levy schemes. The “right” design depends greatly on country conditions and the goals pursued with the scheme. Some authors have nevertheless tried to list a couple of success factors for levy schemes on a rather general level. However, it should be noted that various opinions may exist regarding the optimal design.

154. For instance, Greenhalgh (2002) suggests a couple of principles for the design of a levy, suggesting that a levy should be linked to profits and not payroll (see also Stevens, 2001).⁹ To avoid penalizing new companies and SMEs, it should be graded. Greenhalgh (2002) further argues that the training of low-skilled workers should be given a higher priority, possibly by stipulating the levy share to be spent on such training. Progressively increasing taxation of wages is suggested to “tackle the risk of poaching”. And, quality control of training providers as well as monitoring of achievements by

training participants are mentioned as particularly crucial measures. Smith/Billett (2004, p. 8) claim that enterprise involvement in the decision-making regarding collection of the levy and disbursement of its proceeds is crucial to the success of a scheme. Indeed, they go as far as saying that enterprises or industry sectors should be able to identify a particular need for skill development.

155. At any rate, even if one holds a different view on instrument design, it appears to be indisputable that employer buy-in is crucial. And it goes without saying that collection and disbursement of the levy, as well as procedures for proving training eligibility, should cause as little bureaucratic burden as possible, especially for SMEs. Additionally, provision of consultation services to help determine and formulate training needs as well as support in filing grant or reimbursement applications may be crucial in this respect. Furthermore, independence of the funds from government tax revenues is recommendable to avoid the diversion of resources to other purposes. Finally, the funds managing agency should not also be a training provider as this has led to the crowding out of private providers.

¹ Funds granting money to employers without imposing a levy on them are in effect subsidies and pertain to the respective section in this report.

² Being built on donors and government contributions, the instrument comes closer to a subsidy anyway.

³ UK data in the CVTS are not comparable due to methodological reasons (CEDEFOP, 2010).

⁴ Total monetary expenditure of enterprises includes direct cost of training and the balance of contributions to, and receipts from, training funds.

⁵ Dar *et al.* (2003, p. 14) state that firms can claim partial reimbursement of costs for certified courses. Thus, the scheme may have to be viewed as a hybrid.

⁶ It could not be inferred from the reviewed sources whether the funds are disbursed to enterprises or directly to individuals.

⁷ A sectoral training levy exists in the Australian construction industry. It is operated in different forms in various states and amounts to 0.1-0.2% of building value. The proceeds, gathered in the Construction Industry Training Fund, are used, however, mainly to finance initial vocational education.

⁸ Dar *et al.* (2003, p. 8) quote some general principles that have been suggested by Middleton *et al.* (1993) to guide the operation of levy schemes. These, however, are formulated at a very basic level and do not provide much support for the design of instrument.

⁹ We purport that the linkage to profit may undermine employer acceptance of the levy. In effect such a levy would be equivalent to an increase in profit tax.

5 CONCLUSION AND FINAL REMARKS

156. There is a considerable knowledge gap regarding the true effectiveness and efficiency of specific policy instruments to promote employer-provided training for employees. Little is known beyond some output measures and the fact of whether self-imposed targets were achieved. Nevertheless, the most severe problems associated with the various instruments appear to be obvious. Indeed, advantages and disadvantages (or strengths and weaknesses/risks) have been discussed for a long time (*e.g.* Gasskov, 1994) and it appears that most insights have not changed for many years.

5.1 *Summary of findings - subsidies*

157. The most obvious caveat of indirect subsidies, *i.e.* tax incentives, is given by the potential deadweight effects. At the same time, they often appear to be exploited to a rather limited extent. Even if firms can be convinced to utilize tax incentives, unanticipated substitution effects may impair effectiveness. This has led Leuven/Oosterbeek (2004) to express skepticism regarding such incentives despite the compelling advantage of minimal bureaucracy. Further, tax incentives may fail in targeting specific groups of workers or enterprises. They mostly favor large enterprises and highly educated individuals, thus being an appropriate choice only to overcome aggregate under-investment. Direct subsidies may be more effective in targeting specific groups of employers or employees, therefore reducing the risk of deadweight compared with tax incentives.

158. Nevertheless, with any form of subsidization there is a trade-off between the goals of reducing red tape and reducing deadweight effects, as the latter requires more comprehensive eligibility criteria and approval processes. Further, subsidies always entail the risk of favoring certain forms of learning, *e.g.* courses, over others, such as on-the-job learning.

5.2 *Summary of findings - levies*

159. With regard to training funds in combination with firm levies, compulsory schemes have been challenged by Smith/Billett (2004, pp. 35-36; 2005, pp. 110-112). They argue that these may even be detrimental and erode employer investment, outweighing the potential benefits. Consequently, those authors state that the likelihood of employer acceptance increases “the more targeted” the levy (*e.g.* sectoral, regional) and “the more localized control” over the funds is (*ibid.*). In fact, their criticism rather relates to universal levies that are initiated by governments and based on law. Gasskov (2001, p. 5), for instance, praises the European sectoral funds, which seem to demonstrate “that the expansion of enterprise training can be achieved with limited government intervention”. In his view, voluntary sectoral funds “have been able to establish and maintain a dialogue between employers in the sector and to discourage poaching of skilled crafts workers” (p. 6). Nevertheless, even in this scheme, contributions are usually compulsory for companies, if the respective sector has decided to impose a levy. Hence, Stanfield *et al.* (2009, p. 42) argue that pre-existing strong tripartite relationships at sectoral levels are a feature of successful levy systems. In the end, however, sectoral training funds often remain small in scope (*e.g.* Netherlands, Denmark).

160. Employer acceptance, however, is not equal to success. Some levy schemes may achieve their goal in terms of increasing training incidence, but, even if designed skillfully in a way that takes into account the risks discussed above, they fail to distribute the resources evenly across the economy. In fact, the incidence of employer-provided training seems just to be mirrored by the funds activities. Large firms benefit to a larger extent than SMEs (Johanson, 2009, p. 50; Dar, *et al.*, 2003, p. 7). At the same time, virtually all known levy schemes, even the sectoral ones set up through bipartite initiatives, fail to improve access to enterprise training for groups at risk. In fact, Gasskov (1998, p. 35) argues

that equitability of training in the workforce does not make much sense as a goal of levy schemes. Nevertheless, the training of SMEs should be given priority in levy schemes.

161. Furthermore, in order to function well, levy schemes require a sufficient number of contributing firms and the administrative capacity for raising funds and disbursing them in line with specified criteria. Consequently, levy schemes have encountered serious problems in some developing countries. For this reason, the literature reflects doubts that low-income countries are capable of operating efficient and equitable schemes (*e.g.* Dar, *et al.*, 2003, p. 10; Johanson, 2009, p. 51). In fact, stories of success have been reported especially for fast-growing countries (*e.g.* Singapore), where the positive development of training provision need not necessarily be attributed entirely to the functioning of the respective levy scheme.

5.3 *Comparing instrument types*

162. Comparing advantages and disadvantages of levy and subsidy schemes is not altogether meaningful as each type of instruments may pursue different goals.

163. Levy schemes have been devised to mitigate market failure due to poaching, with the intention of extending the resource base and broadly stimulating training. They have been criticized for not being able to equalize participation patterns across enterprises and employees and may suffer from windfall gains accruing to larger enterprises, if the disbursement mechanism involves too much red tape to motivate SMEs to participate. However, equalizing the training distribution across firms is, indeed, not their genuine purpose. Rather, by approaching the financing of enterprise training collectively, they are intended to encourage the provision of training by employers that fear the risk of poaching.

164. Direct subsidies may be more adequate tools to address specific groups of enterprises or employees for the purpose of improving equitability in access. Grant schemes, however, may involve cumbersome approval or application procedures. Voucher schemes, on the other hand, sometimes bring only a minimum of bureaucratic burden for employers and employees. A rather successful example is the training cheque in the German federal state of North Rhine-Westphalia. Yet, even this instrument does not reach low-skilled workers and very small enterprises to a satisfactory degree. Similarly, tax incentives are efficient, but discriminate against these groups, too. The issue of deadweight losses applies to all kind of subsidy schemes.

165. In summary, we must support the OECD criticism (2004, p. 29) that “prevailing policy and practice regarding adult education and training do not compensate for inequalities in initial education and training.” At any rate, the question has been raised as to whether the goal of compensating such inequalities can be addressed at all with policies targeted at the employer-side. In any case, well-targeted financial aid and consultancy provided to specific enterprises and employees appears to be more appropriate than extensive support for a large number of companies.

166. An interesting pointer is given in EIM/SEOR (2005, p. 66) and CEDEFOP (2008, p. 80): SMEs may not be receptive to public aid programs requiring elaborate proof of training eligibility or demanding the development of training plans. On the contrary, programs shifting proof of training eligibility to the supply side, namely the providers, may be much more attractive for SMEs. Furthermore, a study by Dawe/Nguyen (2007) reviews the literature on small enterprises’ training and provides a list of factors crucial to make programs work for this category of firms. They conclude that “financial incentives alone are not sufficient to meet small business needs”, because they see “evidence that small business managers are willing to pay for education and training for themselves and their employees, if they see the value in it [...]”. To meet the needs of small businesses, they propose (among other things) clearly linking training to business performance depending on specific stages in the business cycle (such as start-up, crisis, expansion, or export), approaching small firms’ managers personally through local advisers, minimizing time spent away from the workplace, paying attention to informal learning processes, and facilitating learning from other business people through collaboration and business-to-business interactions.

5.4 *Final remarks*

167. At the end of this report, a general note must be made regarding the significance of the debated instruments: Smart instrument design may influence success. It can help increase training and training equity accompanied by as little bureaucracy as possible. When judging the success of instrument design, it has to be kept in mind that more often than not policy instruments are meant to tackle a variety of goals simultaneously.

168. The main goal for the instruments discussed in this paper is that of increasing the level of employer-provided training, in order to ensure adequate supply of skills and the economic goals related to skills provision, *i.e.* improving productivity, competitiveness and economic growth. Thus, one might argue that levy schemes are obsolete after all, if there is no hint on poaching being a relevant problem in practice. However, even if market failure in the form of poaching cannot be substantiated, there are other arguments supporting levy schemes, focusing *e.g.* on SME related policies or regional/national policy to improve employment and competitiveness. In addition, mobility of labor, lack of training capacity, quality of training, equal access to training and promoting social inclusion are included in the rationale for policies aiming at increasing employer-provided continuing training. In times of economic crisis, another goal mentioned is that of cushioning the effect of the crisis by increasing training in idle times. Similarly, the existence of externalities due to continuing training as a reason for subsidization remains contested (Hall, 2006; NDP/CSF Evaluation Unit, 2005, i-v); however, inequitable training distribution is another vindication of government subsidies.

169. Finally, one might argue that under-investment of firms in training is due to inappropriate training supply rather than anything else. Smith/Billett (2005, p. 113) state that “making training more pertinent and responsive to enterprise needs might be a way of encouraging greater enterprise engagement in vocational skill development”. Such attempts would need to focus on businesses’ strategic interests. On the other hand, Smith/Billett (2004, pp. 41-42) argue that under-investment could be caused by a perceptual problem: lack of awareness regarding the benefits (*e.g.* productivity effects) of training may hinder investment, especially in SMEs. Hence, supporting the dissemination of information regarding the quality and usability of courses as well as regarding upcoming skill needs can be a task for governments.

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APPENDIX

Appendix Table I.1. Training funds in combination with levy schemes in OECD and non-OECD countries

	scheme	levy rate	base	grading	structure	obligation	waiver	govern.	initiative	type of training	subsidized	collection
OECD												
Australia	exempt	1.5%	payroll			compulsory	<AUD 200 000					tax
Belgium												
France	exempt	0.25%-1.6%	payroll	by size	sectoral, regional	compulsory	< 10 empl.	bipartite	law	CT	yes	Min. Labor
					universal							
Hungary	rev.-gen exempt grant	1.5%	payroll		universal	compulsory		state		PET, CT		
Italy	grant	0.3%	payroll		sectoral/ occup.	compulsory		bipartite ¹⁰	bipartite ¹¹	CT		soc. sec.
Netherlands		0.1-0.7%	payroll		sectoral	compulsory		bipartite	tripartite	CT, DT		self
Spain	exempt	0.42% ¹³	payroll	by size	sectoral	compulsory		tripartite ¹⁴	tripartite trip/law ¹²	CT, DT	yes	soc. sec.
United Kingdom	grant	1-2.5%	payroll		sectoral	compulsory			law			
-Constr. Skills	grant	0.5%/1.5% ⁷	payroll/sub-contracts		sectoral	compulsory	< GBP 73 000	bipartite	bipartite			
-Skillset	grant	0.5% ⁹	production cost		sectoral	voluntary		tripartite	tripartite			
-ECITB	exempt	1.5/0.18% ⁸	payroll/sub-contracts		sectoral	compulsory	< GBP 1 mill.	bipartite	bipartite			
Non-OECD												
Brazil												
-SENAI	rev.-gen exempt	1-1.5%	payroll	by size	sectoral	compulsory		employers		PET, CT	yes	self ²
-SENAC	rev.-gen exempt	1%	payroll		sectoral	compulsory		employers			yes	
-SENAT	rev.-gen	1%	payroll		sectoral	compulsory		employers				
-SENAR	rev.-gen	2.5%	sales		sectoral	compulsory		tripartite				
-SEBRAE	rev.-gen	0.3%	payroll		universal	compulsory		employer				
Ivory Coast	exempt	1.2%	payroll		universal	compulsory		tripartite	for. aid ⁴	CT, DT	no ³	tax

Malaysia	grant reimb	0.5-1%	payroll	by size	universal	compulsory / vol.	< 50 empl: voluntary	state employers	law	CT	prov
South Africa	grant	1%	payroll		univ/sect ¹	compulsory	< R 500 000	bipartite	bipartite	CT, DT	
Singapore	grant ⁶	1%/S\$2	payroll ⁵ < S\$2 000		universal	compulsory		tripartite strong empl	law	CT	
Tanzania	grant rev.-gen	2%	payroll								tax
Benin			payroll					tripartite	for. aid	PET, CT, DT	yes tax
Burkina Faso			payroll					tripartite strong pub	for. aid	PET, CT, DT	yes tax
Nigeria	reimb	1.25%	payroll								
Kenya	reimb		payroll	by sector		compulsory	< 4 empl.				
Mali			payroll					tripartite strong pub	for. aid	PET, CT, DT	yes tax
Mauritius	reimb	1%	payroll								
South Korea	exempt	0.1%-0.7%	payroll			compulsory			law		soc. sec.
Regional											
Quebec (CN)	exempt	1 %	payroll		universal	comp.	<CAD 1 million	tripartite ⁶	law	CT	

Source: see section 4 of this report

Notes: In some cases, information was given only implicitly in the reviewed sources. For, instance the scheme was not always named. However, if mainly providers or training centers of the funds managing agency are funded (as in the case of Tanzania), it can be concluded that the levy is of the revenue-generating type. In general, blanks indicate that no information was given on the respective aspect in the reviewed sources. For some aspects, missing information is a strong hint on a certain type. For instance, if no information exists with respect to government contributions to the funds, it can be assumed that there is no subsidization. The same applies for exemptions or, ways of collecting the funds (usually this done by the managing agency itself), or graduation of the levy. Similarly, if a levy is compulsory and universal, it mostly is based on a law (but could be due to a tripartite agreement, too). However, as these conclusions could not be validated within the time frame for this project, the fields are left blank.

scheme – type of levy scheme (grant: levy-grant; exempt: levy-exemption; reimb: cost reimbursement; rev.gen.: revenue-generating).

levy rate – percentage or amount to be applied to the base

base – base for determination of obligation (e.g. payroll, sales, profit, employees)

grading – graduation of levy (by size: by number of employees; by sector: by industry sectors)

structure – training funds/levy scheme with an (implicit or explicit) sectoral structure in collecting or allocating the funds (sectoral), regional (regional) or global funds/levy scheme (universal). The latter could either employ a universal levy rate, or graduated rates, for instance by firm size or industry sector.

obligation – existence of an obligation to contribute to the funds (vol.: voluntary; comp.: compulsory)

waiver – criteria for exclusion of enterprises from the levy

govern. – governance of funds managing agency (tripartite: representatives of employers, workers, and public sector; bipartite: only employer and worker representatives;

strong pub: high influence of public sector; strong empl: high influence of employer-side; state: entirely government-led)

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initiative – initiative for funds establishment or formal basis of funds (bipartite agreement; tripartite agreement; government initiative/law; foreign aid project, e. g. financed by World Bank)

type of training – mainly support of pre-employment training (PET), company-based training for employees (CBT), training for disadvantaged groups (DT); continuing training (CT)

subsidized – government contribution to the funds, foreign aid or donors (yes, no)

collection – collection of funds (tax: via state tax authorities; soc. sec.: via social security agencies; self: collection by the funds managing agency itself; prov: via education providers)

eval/assess: positive/negative (+/-) evaluation or assessment of instrument. A positively judged instrument may of course have certain deficiencies, and a negatively judged instrument may nevertheless have certain strengths. The judgment in this column expresses the authors' overall impression based on the wording in summary or evaluation studies. It is highly subjective and should not be overrated.

Footnotes: 1 The levy is collected universally from virtually all private sector enterprises. The funds, however, are then allocated to 23 sectoral training authorities (SETAs) for the purpose of disbursement. There is no information on how the allocation is done (e.g. proportionate to number of companies or employees in a sector or alike). 2 The National Security Service collects the levy for a 1 % administrative fee on behalf of SENAI and most of the other training services. 3 The World Bank contributed significantly to the funds under a support project in the late 1990s. 4 As in Benin, Burkina Faso, and Mali, the instrument was supported by a World Bank project. In contrast to these states, however, the levy scheme had existed previously. 5 The levy is based on payroll value, but only with respect to employees earning less than S\$ 2.000. 6 The plan for allocation of resources is drawn up by labor market partner, but approved by the Ministry of Labor and Employment. 6 The scheme is partly based on a cost-reimbursement mechanism. 7 Levy rates are 0.5 % on employees wage bills and 1.5 % of the value of payments to labor-only subcontractors. 8 At the maximum, a firm is charged GBP 39,500. 9 The exemption characteristic is due to an abatements process returning some of the payments according to firms training activities with the level of abatement being graded to five different levels (0 %, 25 %, 50 %, 75 %, 100 %). 10 The chair is taken by the employer-side. 11 Approval by the Ministry of Labour and Social Policies is required. 12 Government has developed the tripartite agreements in a Royal Decree. 13 Levy rates are determined annually by law. The given figure refers to the year 2005. 14 Public sector takes the lead.

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